DOCUMENT RESUME

ED 032 623 EA 002 501

By-Curtis, Thomas E., Ed.
The Middle School.
State Univ. of New York, Albany. Center for Curriculum Research and Services.
Pub Date 68
Note-278p.; Papers presented at a Curriculum Conference (Albany, N.Y., August 8-12, 1966).
Available from-Faculty-Student Association of the State University of New York at Albany, Inc., State University Bookstore, 1400 Wash. Ave., Albany, N.Y. 12203 ($2.00).
EDRS Price MF-$1.25 HC Not Available from EDRS.
Descriptors-Administrative Personnel, *Adolescents, Bibliographies, *Core Curriculum, Educational Administration, Educational Finance, Educational Philosophy, Grade Organization, Learning Theories, *Middle Schools, Nongraded System, Psychological Characteristics, *School Architecture, Teacher Selection, *Team Teaching

A curriculum conference for New York school administrators interested in the middle school concept concentrated on three objectives: (1) To gain insight into the principles of early adolescent education, (2) to become aware of the strengths of the various theoretical approaches of educating the adolescent, and (3) to look at the pragmatics of applying the theoretical concepts. Emphasized throughout 18 different addresses was the responsibility of academic transition assumed by the middle school. At the elementary level, the emphasis is on developing basic skills in a self-contained classroom; in high school the emphasis is on specialization in a subject-oriented program. Middle schools fit into this picture by building self-awareness in the student--thus aiding in the process of social adjustment--and by providing exploratory intellectual experiences in subject matters that are studied more intensely at the high school level. Administration, curriculum design, architectural design, and instructional techniques implied by the middle school are covered. A selected bibliography of 68 citations is appended. (LN)

ED0 32623

Sponsored by:
THE CENTER FOR CURRICULUM RESEARCH AND SERVICE,
SUNYA.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

THE MIDDLE SCHOOL

COMPILED and EDITED by
THOMAS E. CURTIS

EA 002 501

published by F.S.A.

THE MIDDLE SCHOOL

THOMAS E. CURTIS,
Editor

CENTER FOR CURRICULUM RESEARCH AND SERVICES
STATE UNIVERSITY OF NEW YORK AT ALBANY
ALBANY, NEW YORK
1968

PREFACE

In response to continuing requests from school administrators throughout the State of New York, representatives of the faculty of the State University of New York at Albany convened a curriculum conference at the University campus during the week of August 8-12, 1966. This conference was supported in part by a grant from the In-Service Teacher Education Department.

During the week a group of selected New York State school administrators listened to the presentations of some of the most prestigious and knowledgeable people in the field of early adolescent education in the entire country. Each of these men were requested to speak about the implications of the Middle School for their particular area of knowledge. In addition to collegiate educationists, successful efforts were made to arrange for speeches from administrators of schools where model programs were being conducted.

The present volume is a compendium of the ideas of these various men. It is hoped that the view expressed in this book (which were in some cases contradictory due to an attempt to place all viewpoints before the conference participants) will contribute some insights to those persons interested in the Middle School.

Thomas E. Curtis

TABLE OF CONTENTS

1. Issues in Early Adolescent Education — 2
   Morrel Clute
   Wayne State University

2. Evolution of Early Adolescent Education — 18
   Robert Frederick
   State University of New York at Albany

3. Physical Aspects of Early Adolescence — 25
   Gilbert B. Forbes, M.D.
   Professor of Pediatrics
   University of Rochester School of Medicine and Dentistry

4. Psychological Perspectives of the Middle School — 43
   John E. Horrocks
   The Ohio State University

5. Purposes of the Middle School — 55
   Theodore Fossieck
   Principal, the Milne School
   State University of New York at Albany

6. A Middle School In Action — 69
   Walter Pagels
   Principal, Barrington Middle School
   Barrington, Illinois

7. Program and Organization of a Five Through Eight Middle School — 74
   William Alexander
   University of Florida at Gainsville

8. Administrator's Report on the Five Through Eight Middle School — 88
   Paul J. Zdanowicz
   Supt. of Schools; Lee, Massachusetts

9. Education for the Early Adolescent — 103
   Nelson F. Bossing
   Southern Illinois University

10. Grade Organization for Early Adolescents 125
William T. Gruhn
The University of Connecticut

11. The Middle School - Some Architectural Implications 141
Alan C. Green
Rensselaer Polytechnic Institute

12. Current Perspectives in New York State 157
Walter Crewson - Moderator
Donald Benedict
Anthony Terino
New York State Department of Education

13. Administrative Implications of the Middle School 173
Ward Edinger
Jack Ether
Alfred J. Cali
Robert Lorette
State University of New York at Albany

14. The Nongraded Middle School 198
Henry F. Olds
Harvard Graduate School of Education

15. The Middle School: Implications for the Core Curriculum 216
Gordon F. Vars
Director, Junior High School Project
Cornell University

16. Administration's Report on a General Education Program 233
Harvey Handel
Principal: Oneida Junior High School
Schenectady, New York

17. Team Teaching Meets a Friend 240
David W. Beggs, III
Indiana University

18. Administrator's Report on Interdisciplinary Team Teaching 247
Bernard Welch
Principal: Lisha Kill Junior High School
Colonie, New York

19. Selected Bibliography on the Middle School 265

INTRODUCTION TO THE CONFERENCE

Throughout the country ferment is occuring in junior high schools. Basic controversies are raging in cities, suburbs, and small towns concerning issues which have existed for decades. Content, methodologies, teaching personnel, even the basic purposes and philosophy of education of the early adolescent are being questioned by teachers, administrators, and patrons. What are the purposes of our junior high schools? What are the best methods for achieving these purposes?

These and other debates are currently coming to the fore, particularly in New York State. In their place in the vanguard of public school education, the administrators in New York have been considering, planning, and in some cases constructing middle schools. Many interested parties believe that these middle schools will arise as an evolutionary development from the junior high schools; utilizing most of the same concepts which have been accepted as being most appropriate for early secondary education.

Some school districts have fashioned the change from junior high school to middle school with inadequate insights of the various issues involved due to the paucity of available research and theoretical writing concerned with this problem. Motives for the shift to the middle school have been based upon financial and social grounds among others. The necessity for the most economical alternatives in the construction of new buildings, while undoubtedly of prime importance to the taxpayers and indirectly to the school board and administration, must be considered as being extraneous to the basic query as to what administrative organization is best suited for the education of the youngsters involved.

By the same token, while the problem of integration may be alleviated by the middle school organization, this lessening of an admittedly serious and complex problem still must be considered as existing outside the basic framework of the issue of the best education for early adolescents. In the final analsis the motives for moving to the middle school must be based upon solid educational purposes and functions, that is upon the basic philosophy of education.

It is not the purpose of this conference to debate the relative merits of the junior high school and the middle school. This controversy has been raging for several years and probably has created more heat than light so far as any long range resolution to the various problems involved.

The objectives of the conference may be generally subdivided into three areas:

1. To gain insight into the philosophy, principles and functions of education for the early adolescent.
2. To become cognizant of the inherent values of the several basic methodological approaches to the education of the early adolescent.
3. To become knowledgeable concerning the pragmatic administrative implications of theoretical educational concepts, as described by practicing principals.

INTRODUCTION TO THE SPEAKER

DR. MORREL J. CLUTE

If the Middle School is to be considered an evolutionary process derived from the traditional junior high school then it must be primarily aimed toward serving the purposes of early adolescent education, since the education of this age group was the main raison d'etre for the older establishment. Under these circumstances it seems most appropriate as a keynote to a conference based upon the Middle School to be concerned with the basic purposes for the education of early adolescents.

Few people in the country are better qualified than Dr. Morrel Clute of Wayne State University to speak on the issue involved in the establishment of a rationale for the education in this middle segment of American education. Dr. Clute, in addition to his work in public schools, has written numerous articles in educational periodicals and journals. His book, Teaching and Learning in the Junior High School co-authored with Roland Faunce, is recognized as one of the definitive texts in the field. He is much sought as a consultant and a speaker at professional meetings where attention is being given to early adolescent education.

CHAPTER 1

ISSUES IN EARLY ADOLESCENT EDUCATION

BY MORREL J. CLUTE

In every junior high school there are at least two curricula; one which represents what teachers think they are teaching, the other which represents what students are learning. This circumstance will probably always be so for one is the outcome of the other. The school is only a partner in student growth and maturation and not the creator of it. No school can design a course of study to create physical maturation, sex identification, or positive self-concept on a time schedule. The curriculum of the school can be the means by which these developmental tasks of growing-up can be facilitated and enhanced.

Inasmuch as the junior high years represent that period of growing-up where change is most rapid and dramatic, it is viewed by many as the most crucial of all school periods. The junior high school must have a unique program because it is in partnership with boys and girls caught-up in a unique period of growth from which unique problems arise. In the sense that the junior high school is involved in so vital a stage of maturation, the entire scope of its activities can be described as general education. How then can the appropriateness of the program of general education in a junior high school be judged? How can one decide "What is really important?" If we cannot answer this question, we cannot call ourselves teachers; we are only technicians who get our purposes from someone else or something else. In order to examine this question of what is really important for a junior high school to think about as evaluative criteria for general education, let us look at four basic, dynamic concepts related to the problem.

1. Uniqueness: At this moment there are approximately four billion people alive in the world, yet nowhere is there anyone exactly like any one of us; there never has been and there never will be. Each of us exists as one in all of time, different in some way from every other

individual who has ever lived, who is now living, or ever will; this is the fact of uniqueness. It means only one--not to be duplicated, not comparable (television advertisements not withstanding). The circumstance of uniqueness makes cooperation in the human society possible. Each individual has his own unique orientation to life, his own potential and capacities. When one considers the tremendous ranges and varieties of human interests, capacities and skills necessary for a society to function, one wonders how the school could value such a small number of individual capacities, Individual differences represent the strength and versatility of a society or a community. We should do more than we have done in respecting, valuing, and nuturing these differences. The school's limited capacity for accepting differences can perhaps be broadened and increased as we become more skillful in the process of individualizing education. The fact of human uniqueness demands a more individual approach to teaching and learning.

There is, however, another side to this coin. There is a price for uniqueness. The price of uniqueness is aloneness. If I am different from every other individual now living, than I am truly alone, but not being human means belonging to, being related with others. The fact of aloneness is what makes cooperation and the human society necessary. The individual can neither become human nor exist apart from other individuals. His survival with others, share in common some beliefs, values, goals, and aspirations; and, thus, belong to something or someone.

The justification of the school house grows out of this need to relate to others. If education were only a prescription for individual effort as indicated in the beginning of this article, the job could be done without the school house, through home study, ETV, programmed learning, etc. The fulfillment of the need, dictated by aloneness, demands freedom of interaction and communication. The vitalness of this growth need is dramatized in every junior high school when the bell rings for the change of classes, and tragically, for some students these three or four minutes between classes are all that the school provides for students to talk together in trying to discover common meaning in such things such as friendship, love, truth, beauty, strength, hyprocrisy.

The general education program of a junior high school must make more provision for this kind of interaction and exploration of meaning in human relationship. This need is vital at all levels of education but the sudden vault into sexual maturity which characterizes early adolescence makes the need for exploring the "meaning of life" crucial.

11. Basis of meaning: Only recently have we come to appreciate the significance of past experience as a determiner of meaning in learning. Dr. Aldebert Ames, Jr. made great contributions to this understanding through his research in Visual Perception. Research in this area supports what we all have known intuitively: that past experience is all we have to give meaning to our perceptions.1 What we are able to see, hear, taste, smell and feel is dependent for its selection and its meaning upon past experience. We each make our external world from the center of the universe which is the space we occupy. The personal meaning we make out of each clue or situation is limited by the experiences we have known and the purposes we have evolved. When this concept is related to the first one, it provides guidance for school program decisions.

If each individual is different from every other individual, then experience is different to some degree from that of every other individual.

If experience is the basis for making personal meaning out of perception, then meaning will be different for every individual. As you are reading this article you are aware that the page contains some black marks on a white background. The patterned arrangements are symbols for sounds; sounds represent words, and words have meaning. The question, then is, "Where is the meaning?" Obviously the meaning is not really in the words that are reproduced on this page but in the experiences that the individual brings to the reading of this page. It is true, however, that many of us have taught school as if this were not so. We have taught classes as though the meaning were in the page, and that every child could read the same page or chapter and come out with the same meanings. We have even ignorantly used tests in an attempt to validate this false premise. Further evidence of this circumstance comes from the Great Cities Projects where it is found that children have difficulty learning to read, not so much because they lack capacity but because most of the content of the materials is foreign to the experiences of the would-be readers. Head-Start represents the same principle the need of of children for experiences that increase their awareness of their world. Many are learning for the first time the meaning of plate, fork, glass, and for some it's their first experience with affection - with someone who cares.

A basic need, then, for general education is for the school to accept the fact that a child has only his unique experiences with which to make meaning; and the school should, therefore, contrive ways to help young people become open to enriching experience. Willingness to explore the unknown is dependent upon the conditions of the school or classroom, which can make venturing into the unknown frightening...or inviting.

III. Major Developmental Tasks of the Early Adolescents: The most remarkable characteristic of the human organism is its growth and development. The miracles of growth and the evolution of the human personality are the schools' greatest concern and responsibility of the school as the nurturer of growth is clear. Although growth and maturation are continuous processes that go on all through life, there are periods of time in the development of an individual where growth is more dramatic and the outward manifestations of rapid change are more obvious. The years of growth encompassed by the public school are without question most dramatic during the junior high grades. Grades seven, eight, and nine, almost without exception are the grades in which boys and girls are doing the most important growing of their lives. The period of adolescence has too often been thought of as a transition from childhood to adulthood - a period in which little of importance happens. It may be, as many authorities on adolescence believe, that the junior high period is the most important of all the school years. Growth in all areas of development, physical, social, emotional, and mental are so rapid that unique problems arise. The values, attitudes, and beliefs that young people form during these years are likely to be life-long and will in a large measure determine the degree of success or satisfaction they give to or take from life. Therefore, the junior high school has unique functions because it must provide for boys and girls who have unique problems that arise from a unique period of growth.

As teachers and parents, we seldom fully aprreciate or understand the problems and difficulties which confront the child as he moves along the road toward maturity. We find it difficult to remember how and when we resolved our own problems of maturation and we tend to believe that what we now know we have always know. If we do not understand the complications that surround a child's struggle for independence and the difficulties he has in discovering his own identity, our expectations for boys and girls become unrealistic. The demands we make on young people can create tensions and enxieties that can be damaging to healthy growth.

The school has the rare priviledge of being not only a witness to the miracle of growth, but also a partner in creation when the school provides a habitat in which it is safe for each grower to go about his own growing. The goal of education can be defined as that of helping every individual discover and understand himself as a person of worth and dignity and helping every individual discover the best ways of relating to his world, vocationally, socially, personally. The function of the school, then, is to provide the kind of nurture where exploration can satisfy the growth needs of youth. The function of exploration takes on added significance in the junior high years when we examine characteristics of growth and change during these years.

The growth factor central to all others is the cycle of puberty. Authorities on child growth and development correlate the growth spurt with the beginnings of sexual maturity.

> Usually between the age of eight years twelve years among girls and between nine years and thirteen years among boys there commences a sequence of changes in velocity of increase in height, body breadth and body depth, in heart size, lung capacity, muscular strength, and other

> structures and functions. This particular sequence of changes in the velocity of physical growth is unlike anything which has occured before and unlike anything anything which comes afterward. The sequence lasts from four and one half to seven and one half years and completed somewhere between the ages of fifteen and eighteen years in girls; between seventeen and twenty years in boys.2

This remarkable growth spurt which results in physical and sexual maturity has a tremendous impact on all aspects of life. With the development of secondary sex characteristics which follows soon after the advent of puberty, the adolescent in reality becomes a new person in a new world. He has a new body, different in many ways from what it has been before. He has new feelings, attitudes and desires which not being understood create tensions, anxieties and frustrations which in turn manifest themselves in behavior that is often bizarre, unpredictable and unexplainable.

There is no easy simple way to classify or describe adolescent behavior. Some students of adolescence have used the term "developmental task" in referring to the adjustment amd achievement important to each stage of development. Each task must be successfully accomplished in order that other ones may be achieved.3

Other writers on the junior high school have summarized the complex traits of the early adolescent under six topics. This listing seems to be the most useful for examining school curricular practices in relationship to growth during the crucial adolescent period.

1. Difference in physical development (in height, weight, sex, rate of growth, maturity.)

2. Problems of rapid change (physical growth of external and internal organs, including sex characteristics.)

3. Expanding but unstable interests (boys in

collecting, girls in the opposite sex, both sexes in television, movies, music, creative activities, and intellectual experiences.)

4. Striving for independence from adults (resulting in the club or gang, the chum, the hero-figure, the earlier sex interests in girls, the urge to escape parental supervision.)4

5. Special fears of early adolescence (about growing up, about one's inadequacy, about sex and other physical problems about being different.)

Idealism in early adolescence (the intensive development of ideals and ethical concepts, the urge for religious ritual, the eagerness for social service.)

The difficulty in classification results from the wide range of differences that exists when comparing growth characteristics of individuals. This is obvious when a group of twelve year olds are observed as in a typical seventh grade class. Most girls will be larger and taller than most boys. But the girls whose development is generally from one and one-half to two years ahead of that of boys show great variations within their own growth patterns. Some girls who mature early have developed secondary sex characteristics and are growing rapidly by the time they enter seventh grade. Others who mature later grow more gradually and have not yet developed sexually. They are likely, however, to be taller than those who mature early. The same variations exist for boys, but only a few will have begun on the growth spurt by seventh grade. Teachers are aware that such variations in growth are not abnormal but the individual student is not. A child sees himself as different from his classmates, because he is maturing rapdily or because he seems not to be maturing at all, is often worried or anxious. Tall boys and tall girls are frequently misjudged if we as teachers make the mistake of equating size with maturity. Feelings in inadequacy are reinforced if adults expect adult behavior simply because students are nearer to adult size. Not only do teachers need to understand that such variations in body development and in sexual maturity are normal, but they need to help students understand. Psychologists have been telling us for many years that the most important factor of healthy growth has to do with how the individual feels about himself - his self-concept."5 The way a child feels about himself has much to do with how he resolves his problems. Young people need to see themselves in positive ways. In this stage of growth it is particularly important that the adolescent does not feel that he is odd or different because his growth pattern varies from others.

One of the tasks of growing up which may be the most difficult to achieve and the one which is the most painful for parents and teachers to understand is that of becoming independent. Closely related to this task and a part of the process of achieving independence is that of making a satisfactory heterosexual adjustment or the proper identification of one sex role. What does it mean to be a girl? What does it mean to be a boy? The penalty for failure to accomplish these tasks is indeed great. If a young person were not successful in becoming independent from adult direction, he would never be able to leave the security of his home nor establish a family of his own. It really means that parents are rearing children to the point where they can say, "I don't need you anymore." This is also true for teachers as self-direction is high among the important teaching objectives. We see the child who enters kindergarten as being almost completely independent upon adults for life and for direction in almost all of his activities. When this same child graduates from high school, we hope that he has become self-controlled and self-directed. How then does the school facilitate the change from independence to independence and the discovery of a proper sex role? Understanding the process and the ways in which the peer group is vital to these developments will help teachers and ease the pain for those who are frustrated by adolescent behavior. When the child first discovers that adults do make mistakes, he begins to identify more and more with play-mates of his own sex. Thus begins a relationship with a peer group which plays a vital role in becoming independent. In the group he finds others with similiar feelings and as security within the froup grows, courage to resist adult domination also grows. Such change is not easy and the fear of completely losing adult affection thwarts the desire to be one's own boss. In the junior high school where rebellion against adult control is strongest, the need for peer acceptance is greatest. To be one of a gang or group provides safety and security. To be alone or stand out is frightening. Hence, adolescents go to great extremes to be like the others of the group. They dress alike, use their own unique brand of language and try to behave in comparable ways in similar situations. There is, however, no consistent pattern of behavior, for although adolescents seem eager for independence they are also frightened by their inadequacy to handle it and are aware of the need for adult approval. They, therefore, often vacillate between aggressive hostility and submissiveness. It is not unusual for the same class in a junior high school to complain one day that they are treated like children and not allowed to do anything for themselves and on the next day that they are not given enough help or told what to do. Teachers are well aware of these inconsistencies in behavior. Those experienced in working with adolescents also know there is a great difference in how individual children work out the problem of gaining independence. The child who has grown in self-esteem through sharing in decision making both at home and in school seems to make the adjustment smoothly while those whose striving for the same degree of independence have been held to a minimum seem to explode more violently.

Teachers are also well aware of the problems that arise in a classroom when a situation makes it necessary for an adolescent to choose between that little is left for intellectual activity. The "lazy" adolescent may be only the child whose energy supply has been drained by rapid physical growth or used in resolving anxieties or fears about special problems, and thus he cannot give himself to the tasks of academic learning.

For most adolescents it is, however, a time of rapid expansion and development of intellectual capacity and interests. It has been estimated that in normal growth about half of mental capacity has been reached by the seventh grade level. The full mental capacity is achieved in the next four to six years. Interests develop and expand but often change quickly. It is as if the child has so little time to explore and there is so much to discover that he cannot spend much time with any one task. Teachers need not become perplexed by the way that adolescents can appear to know so much from so little experience; they can become careful observers of behaviors in order that they may help boys and girls in finding themselves in their new world.

The road to maturity is a difficult one. Whether or not a school through its teachers is providing the proper nurture for growth will in the long run depend on how adequate the boy or girl feels about himself, and the degree to which each child feels he can approach the problems of life unafraid.

IV. The Teacher in General Education. We finally come, then, to a definition of general education in the junior high school that is different from the usual definition. This definition says that what is really important is how teachers behave with students. Much has been written about the books to be used, concepts to be developed, subjects to be taught, but this is important only as a means to help boys and girls become more adequate in coping with the problems of growth and maturation. Becoming adequate includes understanding more, knowing more, developing skills and capacities for satisfying living as well as adequate in resolveing the problem of adolescent growth. The teacher is the key to the success of general education. The particular subject matter can be quite irrelevant because any of it can be used to help a boy or girl feel more confident of himself in a puzzling period of growth. The thing that a teacher can do something about is the way in which he uses himself, and the way he builds his value system. If the schools are going to succeed in providing an equal educational opportunity for each child, then each teacher is going to have to work hard at increasing his scope of valuing. As a teacher it is easy to fall into the trap of worshiping his own image. It is easy for a teacher to respond in positive, accepting ways to a student who can read well, write well, remember well, and express himself well. It is far more difficult to respond in an accepting manner to the teenage girl with an exaggerated hairdo and a short tight skirt and the tight trousered, pointed shoe, long haired adolescent boy who has difficulty doing any or all of these things. Our schools traditionally have focused on the development of a limited number of academic skills and talents, a condition that cannot continue to exist when we consider the multitude of abilities and interests that are needed to make a community and a society function. By valuing only those who have high potential for developing academic skills, we have unknowingly built in a rejection system for those who do not measure up to "normal" expectations. If we believe that general education is primarily citizenship education, which is not only knowing the right thing to do but also being disposed to do it, then we must examine critically all of school organization, school policy, teacher practice that predetermine rejection for an increasingly large number of students each year. In order for a person to grow and respect another, he must have some reasons for respecting himself. He cannot continue to carry on school practices that cause students to see themselves as failures, unwanted, and unworthy. This is true at all levels of school, but it is most crucial at the junior high school level where young adolescents are extremely impressionable.

There are many school practices that have come down to us from prescientific days that make it difficult for a teacher to avoid rejection and resulting hostile feeling of youth toward an adult managed world.

All of the following practices have the possibility of rejection built into them:

The lock-step practice of annual promotion, with a prescribed course of study for each grade or class, maintaining status with his peers and yielding to adult authority. The wise teacher avoids such situations for peer group loyalty is almost always the choice the student makes.

In discovering one's sex role the peer group is equally important. The pre-adolescent boy-gang finds girls contemptible and think of them as "sissies" who should be teased and tormented. Most boys are at this stage when they enter the seventh grade, but some are discovering that girls are different. Girls, whose development is from one to two years advanced over that of boys, are more ready to accept boys. Although they make a great show of protest about the teasing, which they are secretly enjoying, they become more aggressive in urging and training boys in heterosexual social activities. There is increased interest in mixed group activities, but they are more likely to attend such functions in groups rather than mixed couples. In exploring the meaning of love and affection adolescents frequently form attachments for older persons.

> These special friendships or "crushes," are common to boys and girls during the junior high school years. It is not unusual for girls to have "crushes" on men teachers and for boys to show special interest in a female teacher. Neither is it uncommon for boys and girls to form a special attachment for an older person of their own sex. This phenomenon seems to be a necessary prelude to achieving satisfactory heterosexual relationships with peers. Such "crushes" seldom last more than one to six months and should not be alarming unless they persist into late adolescence. Both men and women teachers need to understand the nature of this special attachment and recognize it as a natural and normal growth.6

The dominant characteristic of adolescence is the need to explore. As previously stated it is a new body with a new and different world. Rapid change requires constant readjustment. Old values and attitudes are examined, sometimes discarded, sometimes strengthened but always modified. Pre-occupation with problems of emancipation and social adjustment often get in the way of academic learning expected by teachers and adults. Growing requires energy; energy used for growth may be in such great demand that little is left for intellectual activity.

The use of a single basic text as the only source of content to be learned and measured is a gross violation of what we know about individual differences.

Ability grouping is an automatic device for creating feelings of inadequacy for a fourth to a third of the students of any given school. Wattenberg estimates the damage from this practice to the learning ability of the more able students to be as high as 50 percent.

Restrictions and limitations placed upon participation in a school government, athletics, and other student activities can be barriers to the achievement of citizenship goals.

Most fiendish of all is the use of the concept of the normal curve of distribution as a classroom measuring tool. Use of this comcept guarantees the damage of 25 percent of a classroom group before the teachers even know who the students are going to be. Comparative, competitive marking is always destructive for the students who consistantly fall in the lower ranges.

Student records and test data including achievement scores and intelligence rating can be and are frequently misused by teachers to the detriment of students.

Most harmful of all are the practices to teachers that cause succeeding teachers to see students as potential trouble-makers or impossible learners. Year after year teachers pass along, by word of mouth, information about students which is forever damning, and much of it gets into his records. Each succeeding teacher is easily prejudiced and see poor John as a potential threat or stupid learner. This is what causes a junior high student to say to his counselor, "Once you get a name in this school there is nothing you can do to change it." How often should a school burn records and give a child a chance to start over, or should these negative perceptions of how he handled his growth problems haunt him forever? What if the purpose of the school was to help each child develop the most positive record of his growing up, one in which he shared and helped to decide what was worth including?

For isn't it really important that when a boy or girl leaves his class at the end of the day, week, or year that he feels:

A little more adequate--able to do more things.

A little more cooperative--rather than hostile.

A little more understanding--respecting himself and others.

A little more courageous--less fearful of the unknown.

Maybe this is what is really important for general education in a junior high school.

FOOTNOTES

[1] For an interpretation of Ames work see: Earl Kelley's, Education for What is Real and Hadley Cantril's, The "Why" of Man Experience, and other writings by same authors.

[2] Herbert R. Stolz, M.D., "Adolescent Problems Related to Somatic Variations," National Society for the Study of Education, Adolescence (Chicago: The 43rd Society Yearbook, University of Chicago Press, 1944). pp. 81.

[3] For fuller discussion of developmental tasks see Robert J. Havighurst, Developmental Tasks and Education (New York: Longmans, Green and Co. 1952), pp. 2. Havighurst expresses his appreciation to Lawrence K. Frank, Caroline Zachry, Daniel Prescott, and Caroline Tryon for their help in formulating the concept of developmental tasks.

[4] Roland C. Faunce and Morrel J. Clute, Teaching and Learning in the Junior High School (Belmont, California. The Wadsworth Publishing Co., 1961) pp.123.

[5] See the writings of Combs, Maslow, Allport, Kelley, Fromm and others for developments of the Self Concept and its implications for learning.

[6] Ibid. pp. 44-45

INTRODUCTION TO THE SPEAKER

DR. ROBERT FREDERICK

It is ordinarily difficult to consider suggested changes in any organizational structure unless the background of the original structure is known. How was the junior high school organized at its inception? What were the significant historical purposes espoused for it? Have these purposes changed over the years? With the answers to these and other questions it may be possible to evaluate the present situation, and determine the advisability of current proposals for innovations.

In order to learn the answers to these and other questions Dr. Robert Frederick, professor emeritus at the State University of New York at Albany, has been asked to speak on the topic, Evolution of Early Adolescent Education. Dr. Frederick was one of the early movers of the education of this age youngster, and through his efforts particularly contributed to the theory of extra-class activities, and methods of studying in the junior high school. A close examination of the past half-century of development of the concepts of early adolescent education must be of assistance in current considerations of the Middle School.

EVOLUTION OF EARLY ADOLESCENT EDUCATION

This speech has given me a chance to review some of the history of the evolution of early adolescent education. I went over to Martha's Vineyards to see my former major professor, Phillip W. L. Cox. We visited for a day about the early days of the junior high school. I felt I would be a stranger among you until I heard the address this morning. We were arguing some of the same things in the old days.

There are, it seems to me, three groups of people who assist in innovation. There is, first, the professional educationalists; those are fellows like Musella and Curtis and me. Our business is to study education as an institution as it operated in our society. In other words, we study education as the physician studies the human body. (Incidentally, we are in some quarters not quite respectable yet). Second, there are the non-educationalists in the intellectual community who seldom loom large in the evolution of this thing we call Early Adolescent Education. Notably, of course, we had Harper of Chicago and Elliott of Harvard. Now of course, you have Bester, Rafferty, and one I am not certain that I should put this category, Conant. It might be possible to move him into the realm of the educationalists because Conant was President of Harvard before he went into the political, diplomatic realm as a student of education. I brought along one of his early studies, "Education and Liberty." He traveled through the English speaking countries to study the nature of the secondary schools. He paid particular attention to the percent of students who attended secondary schools in these English speaking countries. We in the United States had enrolled about 66% of the boys and girls of high school age attending high school. The nearest, as I recall the table from the report, was New Zealand or Australia with approximately 22%.

The third group involved in education are the administrators. These are the men in the field who actually do the job of organizing, managing, directing and guiding the educational program as it goes on in the classroom. Now my interest obviously is with the first group, that is professional educationalists. It has been my major interest throughout my professional life.

I see my job then as selecting from the history of the evolution of the junior high school those lessons which may be of some help to you as you serve in one of those capacities. As suggested, history ought to bury itself, except as it throws light on current problems. I am going to skip over the bare bones of historical sequences of the program of American education. It was started by Dame Schools where some spinster in her community gathered about her some boys and girls and taught them to read. The of course we had the establishment of elementary education in Massachusetts, and came up through the Latin grammer school of 1635. One of the earliest efforts at modernizing American education was Franklin's Academy in 1751. Old Ben Franklin tried to make secondary education relevant to the needs of boys and girls. He didn't succeed. You know what happened to the Academy. It went the way of most educational innovations, and became a highly academic college preparatory, highly selective institution. Now although a few are left, they have almost disappeared. The Kalamazoo Case of 1874 gave legal, financial authorization for the building of our American secondary education system.

The revolution started in American education about the time of 1890. In 1890 something happened so that everybody and his brother began to attend secondary schools. That was a population explosion without parallel in the history of education, and it hasn't been paralleled yet. The junior high school is part of the revolution that followed this explosion in attendance. The sons and daughters, largely the sons, of the favored group, previously had gone to high school for one reason: mainly to prepare for college. Now in 1890 the other folks began to go to high school. Nobody, as far as I know, has ever studied this historical movement The shift from the classical, European tradition is part of our total revolt from Europe. We revolted politically and governmentally in 1776, as I remember. We revolted in our indigenous literature a little later. We revolted in education beginning about 1890. We turned our back on Europe and built our own domestic educational program. The junior high school was part of the structure of this new kind of education; new in the whole wide world. Now European education had been the education of few beyond primary education or as they used to say "education in the vernacular," that is the mother tongue. In 1952 English speaking countries except the United States, were still pretty largely doing that. Secondary education in Europe was, until very recent times, largely Church dominated. Our Congress put the school in the public domain. The European schools had a single curriculum, largely linguistic and mentalistic. (In Europe only the part above the ears goes to school.) That is a program typical of the European classical secondary school, the gymnasium, lyčee and the famous British grammar school. It is a rationalistic kind of education. That is, it is training in a logic that is closed. It is puzzle type thinking; it is ivory tower.

I had occasion to work for a semester in France, and a chance to study their educational system. A secondary school in France is almost impossible to find. It is likely to be in an old monastery hidden on a side street. I saw only one high school that to any extent resembles ours. In one rather large high school the toilets were in the cloisters. They were wooden sheds and they were about 20 or 30 feet long because there were no facilities; no gymnasiums; no libraries; none of the extra things that we are so proud of. Now that kind of education for a few, mentalistic youths preparing for a university, would not suit our American educational philosophy. We tried, when we started the Latin grammar schools, to give the the kind of curriculum popular in these European classical secondary schools.

The result was obviously a failure throughout. The prime topic of argument back in those days was the marking system and much academic blood was shed over the issue. Apparently we are still worried about it. We turn from this classical tradition to an age that was socially oriented. If you want a date when America officially accepted the new education, the best I can come up with is 1918. Then under the commonly known Seven Cardinal Principles Report, the American educational community officially said, "We are working for citizenship, leisure, character, worthy home membership and health among others."

We established a required curriculum but we took out the classical pattern; this was the established batteline of education, and still is. We had the required curriculum; English; physical education; mathematics through 7th and 8th; science and all the rest. We had the electives; we installed an elective program for the 7th and 8th graders. If you choose a middle school to replace a junior high school, your attention might well be directed towards attending to individuals, not to what is popular in some narrowly conceived elective program. All we have generally now is home economics for girls and shop for boys; the next step of the elective program starts from here. The 9th grade is the batteline. What we did was move down from required for "Willy Lump Lump," Latin, foreign language, chemistry, physics, and all the rest of the classical subjects that in the minds of many people constituted education.

I can't help but comment to you on one more step. The third curriculum that we perceived was student activities. This made student activities a part of the educational program. They were a part of education. You could travel, as I did, 7,000 miles or more around France and Italy, and never see youngsters playing except in the Municipal Stadium. DeGaulle, with all his faults, is trying to build a new France and he is trying to do this through education. He put in physical education for secondary school systems. Their gym is formalistic, ritualistic. The kind of gym we know, free play, and softball, they cannot conceive. He is trying to build up the French Nation through the physical education program. The activities of course, were capitalized as learning opportunities, There are those people who will claim that a major part of what boys and girls learn is in the life of the school and not in the classroom.

Let us say that the student activities are respectable in America where Harvard was the recipient of an $88,000,000.00 drive for funds. An appreciable sum was for an intramural activity building. And, of course, we are familiar with the Student Unions all across the country. As a matter of fact, we are in a Student Union, and you will pass the Activities Office on the floor above. We introduced another feature into American education, namely student service and what we do for boys and girls.

Libraries; I never saw a Library in a French secondary school. We have a health service; a hospital; a nurse; and physical examinations. We have dental care and we have food service as you have already experienced. In some places we have residences for secondary school pupils, athletic supplies and equipment, "How to study" courses, and the homeroom are other student services. If you want to see this contrast, get some photographs of a modern high school. When I was working on my last book, I traveled across the country visiting schools and colleges and I wound up in Bakersfield, California. Their high school has a campus. How big I don't know, but there are 42 seperate buildings on that campus. There is nothing comparable in the world.

Now as you consider rebuilding the junior high or the middle school or something else, it might be instructive if you were made aware of some of the things we did not do; that we in education wanted to do. These are the boats we missed; these are the "goofs", we didn't look ahead. We didn't assay the course of development. One of the things we missed, of course, was science. We did put in general science, but we didn't make it the kind of thing it should be, and we didn't emphasize it in the way it should have been emphasized. There is no question that the dominant, determining characteristic of our culture is this thing we call science. We gave it some junior high schools two periods a week; sometimes we alternated it with shop. Another thing we missed was politics, or the social studies. We are all aware now of the inevitable drift of control to the centers of government, either in Albany or in Washington. Right now they are debating the handling of an airplane strike. We scheduled social studies but we never did get the social studies integrated and articulated and relevant to the development in this big world out there. It remained academic; it remained history; it remained "bookish." Of course we missed space completely. So did the military, so I don't think we can be too blamed for that. We missed the integration problems and it is ripping out our heart. We had the opportunity, you see, because we had a new institution, and with a new thing prople expect new programs. We missed this integration problem completely.

The new math; we had to wait until the middle of the century; and we had to wait for M.I.T. to get on the "new math" bandwagon. Now had we been smart enough, we as educators and you as administrators, we should have seen this. The new math started at the end of the last century. Whitehead and Russell wrote their books about 1910. Einstein ruined Euclidian geometry in his paper on special relativity in 1905. Why didn't we see these things? We are attempting in our doctoral program to introduce to future administrators the broader cultures so they may, in the future, not be guilty of not seeing what is in front of their eyes.

There is a current discussion whether or not the high school should be extended to the 13th or 14th year to the Community College. During the war, the government put a junior college at, what was then, State College for Teachers, and most of us said, "After the war, thank God, we don't have to have that mess around any more." We did not accept the obvious and had to wait in New York until this decade before the Community College began operating.

The burden of my presentation is that how you slice the 12 year program of education is not all important. There is a saying some of us may be familiar with, "No matter how you slice it, it's still bologna." The structure is not the important thing. Folkes said in his famous essay on man, "For forms of government, let fools compete," I would go so far as to say that how we devide up, how we segment 12 years of school is not important.

It is important, my wife tells me, how you slice bologna, and how you lay it on the plate is important; a big glob of polysaturated bologna is quite unappetizing, even at a cocktail party. So structure is important, but its primary importance lies in the opportunity to do some of the things that ought to be done; to do some of the things that we have wanted to do. So if you debate your Middle School, I hope you will keep in mind why we are concerned. What advantages does it give?

INTRODUCTION TO THE SPEAKER

DR. GILBERT FORBES

One of the motivations most commonly mentioned in rationales for the Middle School is the earlier maturation of children in the 1960's as compared to 1910 when the theory of junior high schools was first espoused. If the primary rationale of the Middle School is to be the education of early adolescents; then, obviously, a change in maturational processes must affect the educational milieu. Although the age at which puberty is attained is, of course, completely individual, some statistics should be available as an indicative factor for those concerned with educational organization.

A paucity of research on physical development in educational journals indicated a need to move outside the profession, and into the field of medicine for the desired information. Dr. Gilbert Forbes, a research pediatrician with the University of Rochester Medical School, has specialized in the physical aspects of puberty, and brings great knowledge of this topic to the conference.

Primates are unique among mammals, in that their growth curve consists not of the usual one, but rather of the two well-defined sigmoid components. The first of these occupies the period of foetal life and infancy, and is followed by a pause of several years during which the growth rate is fairly constant. The second sigmoid phase then carries the organism quickly to its adult size and it is this rapid rise in growth rate which is known as adolescent growth spurt. A protracted period of infantile and childhood growth clearly distinguishes the mammaliam primates, of which man is one species, and is, obviously, the raison d'etre for both the pediatrician and the school administrator.

Just as the phenomena of infancy can be related in time to the infantile group surge, so can those of adolescence be correlated with the adolescent growth spurt. These include the emotional, sexual, and physiological as well as the physical aspects of adolescence. Children who mature early show an early growth spurt. Menarchal age is closely related in time to the apex of the adolescent spurt in height, and the same is true for the masculine increase in muscle strength.

It should be pointed out here that there is considerable variability in both the growth rate and maturation rate; and indeed the phenomenon of biologic variability pervades all aspects of life. Generally speaking, variations are greatest at those periods when the organism is undergoing rapid change, and so we find that both the timing and the intensity of the adolescent growth may differ greatly from one child to another. It is this circumstance which makes the definition of "normalcy" a difficult and at best an empirical one. The growth curve of an individual child can in health deviate appreciably from that for the average of the population of which he is a member.

Table 1 gives data on height and weight for the two age groups which embrace the "middle school" period, and Table 11 illustrates the variation in sexual maturation. The range given in Table 1 includes only the central half of the distribution. One-quarter of the group will fall below the 25th percentile value, while one-quarter will exceed the 75th percentile. From the data contained in Table 11 it is evident that there will be some children

TABLE I

HEIGHTS AND WEIGHTS OF WHITE AMERICAN CHILDREN AT TWO SELECTED AGES

Height, inches	10 year old boys	14 year old boys	10 year old girls	14 year old girls
75th percentile	56 3/4	66 1/4	56	64 1/2
50th percentile	55 1/4	64	54 1/2	62 3/4
25th percentile	53 3/4	61 1/2	53	61 1/2
Weight, pounds				
75th percentile	79.6	123	79.1	119.7
50th percentile	71.9	107.6	70.3	108.4
25th percentile	66.3	95.5	62.8	99.8

who have completed the maturation process before others have begun. Obviously the range of "normalcy" is wide.

Sex differences are clearly manifest in the early adolescent years. Differences in growth and body configuration, and even certain physiologic parameters, are observable much earlier, even in the newborn, but they are slight, and of little consequence until beginning adolescence. Even the timing differs, for the girl experiences all of the phenomena of adolescence, including the growth spurt, about two years earlier than the boy. For a short while she may even exceed the boy in both weight and height, to the obvious consternation of both sexes! The earlier maturation of the female is shown in other ways: dentition is more rapid, myopia occurs earlier, and skeletal maturation is more advanced. The latter accounts for the earlier cessation of growth in the female, at about age 18, while the male continues to grow in height for another 2-3 years. Emotional development, including heterosexual orientation and maturity attitudes, is also more advanced. Girls reach their peak performance in motor abilities at an earlier age than boys, and there is some evidence that they have a slight edge in intellectual attainment. Even the peak in the age incidence of juvenile diabetes is earlier in the female.

Although the timing of adolescence differs among children (see Table II), the sequence of events is fairly consistant from child to child. For the hypothetical "average" boy, the first change, at age 12, is enlargement of the scrotum and the testes. A year later the spurt in height begins, the penis begins to enlarge and pubic hair appears. Age 14 marks the apex of the height spurt, the larynx enlarges, and axillary hair soon makes its appearance. Within a year or so there is rapid increase in muscular strength, and a decided betterment in muscular coordination. The entire process is complete by age 16 or 17. Although the age of fertility is not known precisely, presumably viable sperm are present in the testes about age 13.

In the female, the earliest change is breast enlargement, followed in rapid succession by widening of the pelvis, appearance of pubic hair, the apex of the height spurt (at age 12), and then menarche. The elapsed

TABLE II

VARIATION IN SEXUAL MATURATION, ENGLISH CHILDREN
(DATA OF DOUGLAS, 1966)

1817 Girls		1995 15 year-old Boys	
no.	age at menarche	no.	genital stage
238	under 12 years	489	mature
450	12-13 years	599	advanced adolescence
609	13-14 years	700	early adolescence
520	14 and over	207	infantile

time for the entire pubescent process of about 3 years is a full year less than that for the male. Fertility is usually not established until about a year after menarche.

Other aspects of the growth process which have been under intensive study recently, and which can be correlated with adolescence are the following:

a. The rate of skeletal maturation, that is, the time of appearance of the various ossification centers, the time of epipyseal closure, and the eruption of the teeth, -- all of these are speeded up when adolescence occurs early, and are delayed in the late maturers.

b. Metabolic and endocrine functions also change with puberty. These include blood pressure, breathing capacity, basal metabolic rate, and the excretion of various hormones arising from the pituitary and adrenal glands, and from the gonads.

c. Certain alterations in body composition take place during puberty. Roentgenograms of the extremities reveal an increase in width of the bone and muscle shadows, the changes being more marked in the male. The amount of subcutaneous adipose tissue can be estimated either from roentgenograms or by pinch calipers. This tissue, which is characteristically scant in middle childhood, begins to increase in thickness at about age 10 in both sexes, though the increase is somewhat great in girls. Consequently, the pre-adolescent boy may appear slightly "plump" for a couple of years; but this soon gives way, at age 13-14, to a loss of subcutaneous fat so that by age 16-17 the boy looks quite lean. Meanwhile the girl has acquired an increasing amount of subcutaneous fat, and hence a more rounded figure.

Recent years have seen the development of new methods by which the relative amounts of lean and fat tissue in the entire body can be estimated. One such method, now in use in the author's laboratory, involves the measurement of the body content of the naturally occurring radioscope potassium-40 by means of a sensitive whole body scintillation counter. Since potassium is found only in lean tissue, such measurements can be used to derive estimates of the amounts of "lean" and "fat" in the body. An advantage of this method is that it involves no trauma or hazard to the subject. The results of these measurements confirm the trends in body composition noted above. Male adolescence is characterized by a marked augmentation in lean tissue and a moderate decline in body fat; the female, on the other hand, shows only a modest rise in lean, and at the same time a progessive increase in fat. By age 17 years, for example, the boy is only about 10-15% fat by weight, while the female is 25-30%.

The fact that most of the metabolic activity of the body is concerned with lean tissue adds significance to these data, for nutritional and energy requirements are more closely related to lean weight than to total body weight which includes a variable portion of fat. The distinctly greater mass of lean tissue in the boy demands a porportionally greater intake of calories, protein and other dietary essentials. This demand is further augmented by the greater physical activity manifested by the average boy. Middle School cafeterias should make provision for the rather disparate food needs of boys and girls at this time of life.

d. Heterosexual orientation develops in concert with the physical and physiological phenomena of adolescence, so that the onset of heterosexual behavior patterns will be governed to a certain extent by the timing of the physical maturation process.

Both the inter-and intra-sex differences in development are a source of concern to the adolescent. The transient physical superiority of the girl is a blow to masculine pride, at a time when both sexes are preoccupied with physical appearance. Boys who mature later are more apt to have feelings of inadequacy and rejection, while their opposite counterparts, the early-maturers, enjoy the self-confidence which comes from athletic prowess and the attendant envy of their classmates.

The Middle School, as presently conceived bestrides this battleground, for just as transition and changes are the hallmarks of adolescence, so are rapidly alternating joy and frustration, vain hopes and unrealistic despair. Adolescence marks the beginnings and partial culmination of rebellion against adult authority, but fortunately, it also includes a high degree of adaptability. The school must be geared to these rapidly changing needs, and to the diversity of needs among its pupil population.

But it should be remembered that among the many determinants of adolescent behavior the cultural pattern of the community ranks high. Physical and hormonal phenomena set the stage, facilitate, and indeed are prerequisite for adolescent development, yet they are not the sole determinants of behavior. The cultural milieu, with its expectations and its limits, its ethics and its taboos, is a potent force. Masculinity can be more visible than real in the sense of performance, for example, and feminity should not be equated with sexuality. Innate drives must be matched by confidence for their expression, and the cultural pattern can either accelerate or retard the patterns inherent in the individual.

The point of all this is that the school is, obviously, a major cultural force in American life; and as such it must bear its share of responsibility for adolescent behavior. The relative emphases placed by the school on athletic, academic, and social endeavor must surely influence adolescent goals, and behavior.1

There are many influences which play on the growth response of children. The effect of heredity is easily discerned from the study of racial groups. Even within the members of a given race, the size of the child reflects to some extent the size of its parents, as Dr. Garn's recent data so clearly show (Table III). Chronic disease often results in a slowing of the growth process, and emotional deprivation can do the same. Hormonal factors are also of importance, and the influence of the pituitary, adrenal, and thyroid hormones is well documented. Disturbances here may lead either to acceleration or retardation in growth. Social class differences are well established. The effect of family size on the rate of maturation in girls is illustrated in Table IV.

A word should be said here about the determinants of growth. It is known that adequate function of both thyroid and adrenal glands essential. Equally important, however, are the roles of the pituitary gland and adjacent areas of the brain, particularly the region in the mid-brain known as the hypothalmus. These structures influence not only the rate of growth but also the timing

TABLE III

HEIGHT OF CHILD (BOY) IN RELATION TO AVERAGE HEIGHT OF PARENTS

(DATA OF GARN, 1966)

	Parental Midpoint (inches)		
Height of Child	64	67	70
Birth	18 1/2	19	20 1/4
1 year	29	29	31
5 years	43	44	45
10 years	52	55	59
15 years	65 1/2	68	69 1/2
18 years	67	71	70

TABLE IV

EFFECT OF FAMILY SIZE ON MENARCHAL AGE, ENGLISH GIRLS

(DATA OF DOUGLAS, 1966)

% who have reached menarche	No sibs	2 Sibs	4 or more sibs
20%	11.9 years	12.2 years	12.5 years
50%	12.8	13.3	13.4
80%	13.8	14.1	14.4

of adolescence and the maturation of the sex organs. The pituitary gland elaborates growth hormone and a number of "trophic" hormones which stimulate the function of other glands; the brain itself acts as an integrator and regulator of pituitary function. It is known, for example, that there is a slight correlation between body size and I.Q. among normal children, and generally speaking the brain-damaged child has a slow rate of growth. Boys and girls who mature early tend to make slightly higher scores on intelligence tests both prior to and during adolescence.

Nutrition is an important factor. Children in underdeveloped countries, where frank malnutrition is common, have a slower growth rate than those in the U.S.A. and Western Europe. Japanese children raised in this country grow faster than their blood relatives at home . Conversely, the obese child tends to be a little taller than the average and the girls have a slightly earlier menarche. Hence the adolescent growth spurt, and its associated phenomena, are subject to nutrition influences.

Of great interest today are the well-documented secular changes in growth rates. Children grow faster today than they did in previous generations, and there is good evidence for maturation as well. Encompassing the last five to eight decades, this change has been recorded in many areas of the world -- Britain, Western Europe, Scandinavia, Japan, Canada, and the U.S.A. and for all socio-economic groups. Unfortunately, valid height-weight data are not available for large groups of children prior to the mid-nineteenth century, so we do not know the total duration of this secular change. A few of the available data are portrayed in the following illustrations. Figures la and lb were constructed from the U.S.A. data for boys and show the extent of the secular change in height and weight. For example, 15 year old white males are, on the average, 30 pounds heavier and 5 inches taller than their counterparts in 1880. The change has been proportionally greater in the adolescent (32% increase in weight) than earlier in childhood (15% increase for the 6 year old). Generally speaking, factors which influence growth exert their greatest effect at those times when growth is most rapid, hence the disproportionate secular change in the adolescent. It is also of interest that the secular

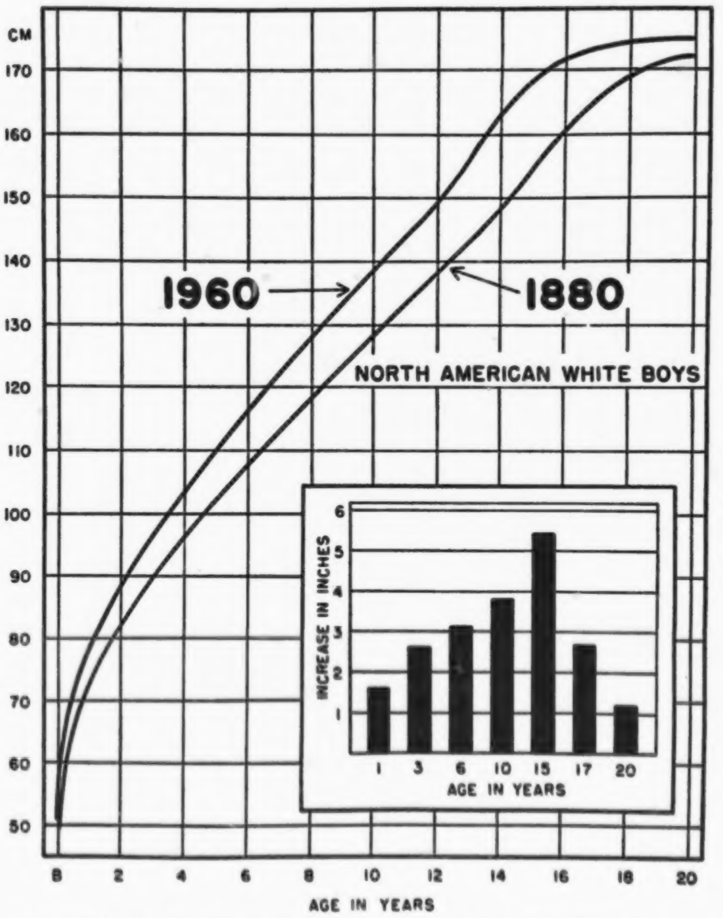

Fig. 1. Schematic curves of mean stature for 1880 and 1960. Inset shows differences between the curves at selected ages.

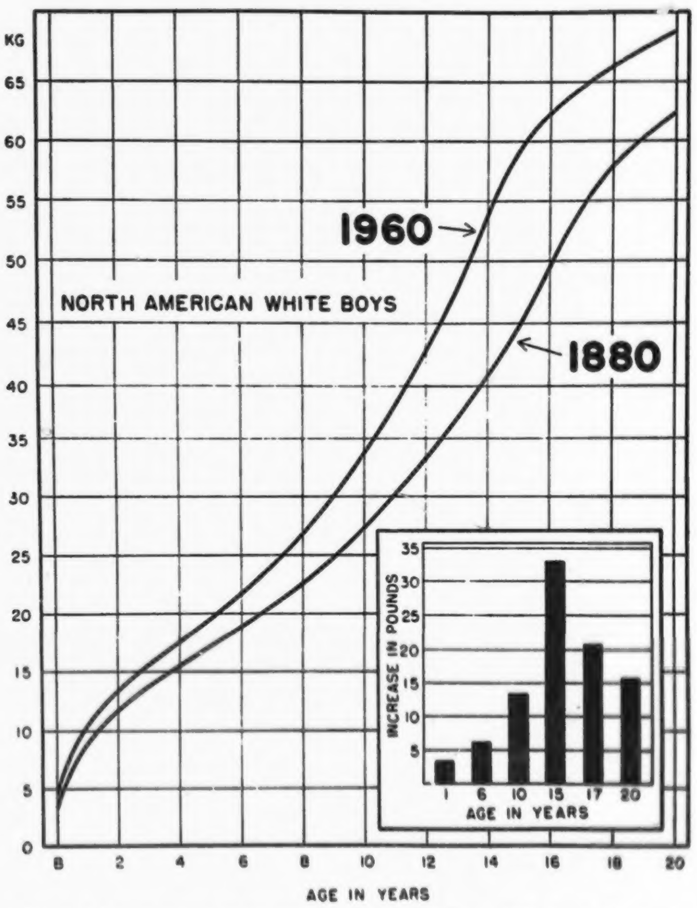

Fig. 2. Schematic curves of mean body weight for 1880 and 1960. Inset shows differences between the curves at selected ages.

increase in height has been less pronounced than that for weight: the 15 year old is now 32% heavier is only 8% taller than in 1880.

The data on Table V show that Negro boys have also participated in this trend, and here, too, weight has been affected relatively more than height.

Data from England are shown in Figures 2a and ab. Here it is seen that girls have participated in the secular change to about the same extent as boys, that both urban and rural populations are involved, and that the change has been a progressive one during the past half-century.

Maturation has shown a similar degree of acceleration during the past century, as illustrated by Tanner's compilation (Table VI). The average age at menarche has progressively declined over the years. It would be of interest to know whether maturational changes of similar magnitude have occured in boys, but such data are to my knowledge not available. The difficulty, of course, is the lack of a maturation landmark for the male as clear cut and as easily evaluated as menstruation.

It would be most important to know whether intellect has shown a similar trend. There can be no doubt, however, about the effect of earlier maturation on emotional growth. Children in the early teens are now more "grown up" and aided by their parents and their schools, have set back the age at which heterosexual school activities are pursued.

One can only speculate on the cause of this trend, and without an established cause it is impossible to forsee the future. In the absence of good growth data prior to the mid-nineteenth century it is equally impossible to project the current trend backwards into previous centuries. We must be content with the data at hand.

Of the possible causes, there are four which may be considered. First, the secular change may merely be a rebound phenomenon, the hypothesis being that prior to the industrial revolution children were of today's size; the revolution brought with a multitude of social, economic and nutritional factors which stunted growth, and we are not, and have been for a half century or more merely

TABLE V

SECULAR CHANGES IN GROWTH OF NEGRO BOYS

(DATA OF MEREDITH, 1963)

Age	ca. 1900 Height	ca. 1900 Weight	ca. 1950 Height	ca. 1950 Weight
Birth	48.8 cm.	3.13 kg	50.0 cm	3.25 kg
6 years	112.3	19.0	118.6	22.7
10 years	129.7	28.9	136.9	32.1
15 years	153.2	44.7	164.2*	51.6*
20 years	173.2	63	176.8	70.4

---

* ca. 1932

TABLE VI

SECULAR CHANGES IN MENARCHAL AGE, YEARS

(DATA COMPILED BY TANNER, 1962)

Average Age at Menarche (Years)

Years	Norway	Sweden	Germany	U.S.A.	Britain
1840	17				
1860			16.6		
1880	16.2				
1880		15.8	16.2		
1900	15.3	15.3			
1910				14.1	
1920		15.0	14.6	13.9	
1930	14.2			13.5	
1940			13.6	13.3	
1950		14.0			13.4
1955	13.3			12.8	13.3

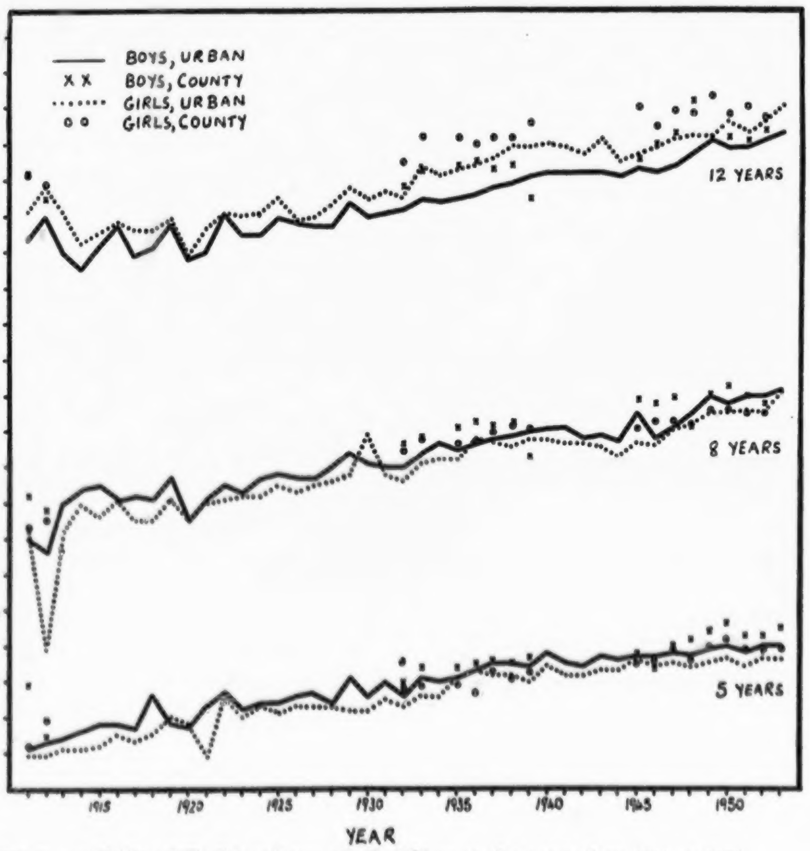

Figure 1.—Height of English primary school children at three ages from 1911 to 1953.

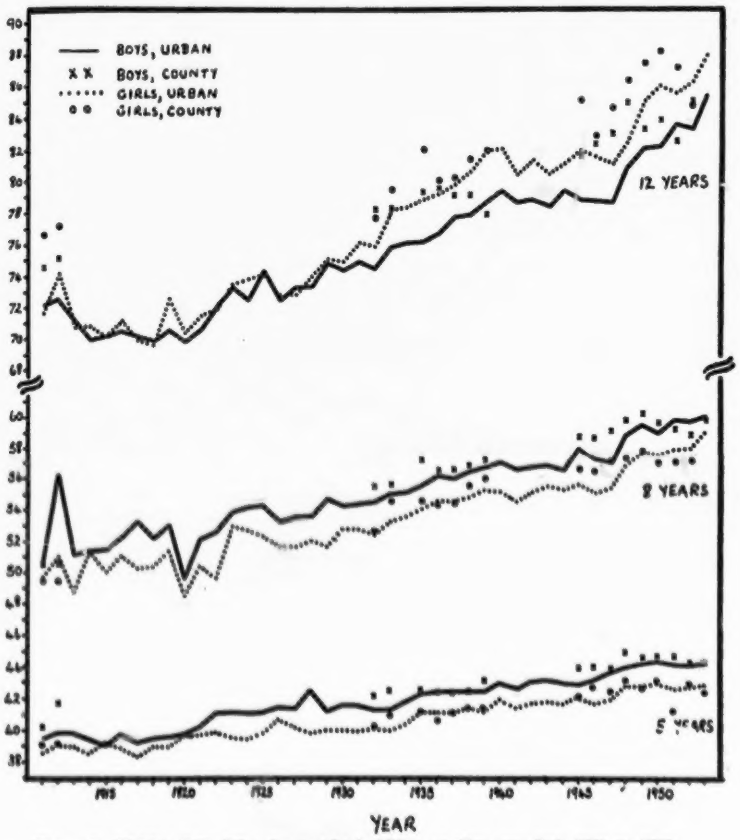

Figure 2.—Weight of English primary school children at three ages from 1911 to 1953.

in a recovery phase.

Second is the phenomenon of hybrid "vigor." We are a nation of genetic hybrids, and hence many deleterious recessive genes fail to find expression. Against this hypothesis is the occurence of secular changes of comparable magnitude in the more stable European populations.

Third is the decline in chronic disease brought about by the widespread use of such devices as immunization, milk pasteurization, sanitation, and more recently antibiotics.

Fourth, and in my opinion the most plausible, is improved nutrition. This may even be the mechanism underlying the inverse relationship between family and age of maturation, previously noted in Table IV. Rickets, a disease which causes a certain degree of stunting, is largely a thing of the past. The manufacture, preservation, distribution, and availability of high quality foods have greatly improved in recent decades. Many foods are now fortified with vitamins and minerals, and there can be no doubt that the economic situation and hence the purchasing power of the poorer economic classes has improved since the turn of the century, School lunch programs are an obvious example.

In all mammals the growth rate is a sensitive index of nutrition; the rat growth rate is one of the first parameters to which nutritionists turn when they want to study the worthwhileness of some dietary factor. And indeed the highly inbred strains of laboratory rate now grow faster than their pre-war counterparts, an effect which is quite likely due to better rations.

Obviously it is impossible to attack the problem experimentally as far as human subjects are concerned, so our hypotheses must remain as such, and predictions as to future secular trends would be fool-hardy indeed.

If I may allow one more prediction, however, it is that more emphasis will be placed in the future on the role of nutritional abundance and accelerated growth rates on the likelihood of arterial and degenerative disease in adult life. A number of animal experiments have clearly shown that systematic underfeeding from infancy enhances longevity, and it is known that adult obesity in man shortens life expectancy. The long life span of man makes for difficulty in evaluating the effects of child rearing practices on subsequent health and longevity, and it should not be tacitly assumed that the better growth performance of today's children is necessarily a prelude to a long and healthy life.

FOOTNOTE

1. In discussing the topic of "Adolescent Subculture and Academic Achievement" (in Underachievement, ed. by M. Kornrich, Chas, Thomas, 1965) Professor James S. Coleman sets forth a challenging inductment: The Implications for American society as a whole are clear. Because high schools allow their adolescent subcultures to divert energies into athletics, social activities, and the like, they recruit into adult intellectual activities people with a rather mediocre level of ability. In fact, the high school seems to do more than allow these subcultures to discourage academic achievement; it aids them in doing so."

Legends For Illustrations

Figure 1. B	Secular changes in height and weight. Reproduced from Meredith, Adv. Child. Dev. & Behavior., Vol. 1 N.Y., Academic Press, 1963, (by permission of author and publisher.)
Figure 2.	Secular changes in height and weight. Reproduced from Boyne et al., Nutr. Abs. Rev. 27, 1, 1957, (by permission of authors and publisher.)

INTRODUCTION TO THE SPEAKER

DR. JOHN HORROCKS

In addition to physical variables in the education of early adolescents, those people most concerned must also consider other aspects of individual growth. Again a paucity of research is indicated in the educational literature. What unique characteristics of early adolescents are most crucial in their education? What implications do these characteristics bring into the question of grade organization? What information can be derived from the field of developmental psychology which can be utilized by educators in their deliberations concerning the Middle School?

Dr. John Horrocks of the Ohio State University was invited to share his knowledge in developmental psychology with the conference participants in order to seek answers to some of these questions. Dr. Horrocks is certainly well qualified to speak on this topic due to his study and research in this field. His speeches and articles as well as his most recent book The Psychology of Adolescence, Behavior and Development attest to his expertise in the area of developmental psychology.

PSYCHOLOGY PERSPECTIVES OF THE MIDDLE SCHOOL

JOHN E. HORROCKS

The middle school is a relatively new arrival on the modern school scene in America, dating back only to 1950 when there appear to have been not more than seven in the whole country. In the years that followed its growth was relatively small until quite recently when the apparent need to rethink our educational procedures lent support to new approaches. Nineteen sixty actually marks the beginning of a great surge of interest in possibilities of the middle' school that resulted, by 1965, in the appearance of one or more middle schools in some 45 of the 50 states. The greatest concentration appears to be in the east (New Hampshire to Delaware), although Ohio seems to have more such schools than any other state. An indication of things to come is New York City's decision this year to replace its junior high school system with the middle school by 1972 or 1973. By now the discussion is rapidly passing from asking whether the middle school is advisable to affirming how excellent such schools are for all concerned. And therein, lies the danger. The bandwagon can become most insidious and we are apt to find ourselves defending, as we so often have done in education, a fait accompli that later experience proves to be less desirable than we had hoped. Once implemented the middle school will represent too great an economic, emotional, and professional investment to allow any likelihood of reasonably early abandonment if it proves to have been an unwise choice. For that reason, before the time when the profession will be committed, it is important to discuss among ourselves the pros and cons of the middle school and to ask ourselves as objectively as we may, will this organization actually achieve what we hope? Further, will it do so more effectively than the junior high school - or some other organization - either as it now exists or as it can be made to exist?

Because of its youth there is some difference of opinion as to the ideal organization of the middle school, but the trend seems to be to make it the middle four years of the 4-4-4 administrative plan of organization. The greatest variation comes in the number of lower grades included since there is some feeling that the fifth grade should not be part of the middle school. As a general rule the ninth grade is separated and placed with the senior high school, thus returning that school to the organization that existed before the advent of the junior high school. It is interesting to go back and read some of the arguments advanced during the days when the junior high school was being formed for removing the ninth grade from the senior high and placing it with the seventh and eighth grades. As we compare these arguments with those advanced for the middle school one can not escape the notion that we have come full circle.

In any event, we find the middle school as including one or two of the upper elementary grades and one or two of the lower high school grades, that is, either three or four grades from 5 to 8. For the purposes of this discussion I am going to assume a 4-4-4 organization, although I shall speakto the possibility of a 5-3-4 sequence.

Where the internal organizaton of the middle school is concerned, the general pattern is to make the fifth and sixth grades self-contained classrooms, with the seventh grade partially departmentalized as it is in high school. While such organizational potpourri poses a number of administrative problems, I am going to assume that this is the form that the middle school takes.

The big question is, of course, why the middle school evolved. Exactly what is it supposed to achieve and is it actually successful in its task. What, in contrast, was wrong with the junior high school and could it have been improved, economically and effectively to meet the objections, And, of course, what is the virtue of the middle school as compared to other possible alternatives to the old 6-3-3 or 8-4 organization.

Unfortunately, the answer is not easy because the reasons for instituting the middle school vary widely from school district to school district, and even within any given school district there are multiplicity of reasons advanced, some of them it would appear, being mutually exclusive. The reasons given ,or in some cases not publicly given but existing nonetheless , range from such expediencies as a partial solution to a district's segregation problems or administrative efficiency to the more educationally defensible reasons of a broadened, more effective curriculum and the provision of an improved psychological climate for the children who attend. There is much talk of adapting to the developmental status of the adolescent and the pre-adolescent. Obviously the advisability of the middle school will vary, depending on the task for which it is advocated. In this discussion, I wish to address my remarks primarily to the psychological reasons for or against the middle school where the children who attend are concerned. I am not going to speak of reasons that apply primarily to teachers, administrators, parents, or the community.

I believe at the very beginning we have to face one problem and that is the fact that the middle school is so new that we can only guess about its effectiveness or give subjective anecdotal evidence about what we have observed or experienced in some middle schools we have seen. That is we hypothesize, we theorize, or we just make emotionally tinged statements about what we believe. Research is lacking and we have few objectively or experimentally arrived at answers as yet. In short, we are at the old business of investigating after the fact and of initially arriving at decisions by "common sense" and of making hypotheses based on our own personal interpretation of experiences that we have had. I say, " as yet" , but it will not be surprising if we erect the structure. Surely the junior high school which we now wish to abandon is a case of point. How much do we really know-for certain- about what it did or did not accomplish ? But all this is beside the point and is for the future. My job now is to hypothesize and tell you what I subjectively think the middle school will do for or against the boys and girls who will attend. Actually, I hope that my hypotheses and personal opinions will have some basis in research , but the research will be about the nature of boys and girls in general. It surely will not be about what actually happened to them in middle schools. I am simply going to try to extrapolate from what I know and what research has told me about children to what I think will happen to these children in a setting called the middle school. I am not going to tell you what I know for a verified fact; I am going to tell you what I believe. You may not agree with me, and if you do not that does not mean that either of us are wrong or right. It simply means that we believe differently.

Let us start with what many people feel is the primary job of the school instruction. Is there anything about the middle school that would lead us to believe that it is a more effective setting for teaching-that the instruction that will occur there will lead to deeper understanding, quicker learning, better retention, or more efficient transfer ? I don't believe so. I can't see anything intrinsic to the middle school that will produce better methodology or better curricula than any other organization of grades. Neither, however, is there anything intrinsic to the middle school that will make it any worse a setting for methodology. A teaching method is a matter of an excellent teacher, the availability of teaching materials, the appropriateness of presentation, and the organization of the material to be taught. Given these things, what can be done in one school can be done in another. Of course the middle school is a new venture and perhaps because the traditions are less entrenched, there will be more freedom to try new things. But I would warn you that a thing is not necessarily better because it is new. It may be or it may not be. As I have examined the literature on the middle school, I find no great departures in methodology of instruction or in the evaluation of the results of intruction. We have had self-contained classrooms, departmentalized approaches before and semi-departmentalized approaches and some have been good and some have been bad. I will predict that this will continue to be true of the middle school as it was true of its predecessors. As a matter of fact, even the concept of the middle school is not really new. It appears to be quite similar to the Sekunderschule or the second school of the Swiss which takes the child from the lower or primary school through 3 or 4 more years of schooling. The Swiss seem to have found organization satisfactory although there is one notable difference as compared to our schools. The Swiss system is a selective one in that the lower forty percent of the class has been siphoned off to trade or apprentice programs. However, the fact that the system works in one culture does not necessarily mean that it can be transferred successfully to another culture, particularly when the first culture exists under a centralized system free of local school boards with their sometimes parochial objectives.

As it is evolving in America, there seems to be limited interest in the possibility of team teaching in the middle school, and while this , again, is not a new teaching concept, perhaps the new organization will draw more attention to it. As an example, the Saginaw Township Community Schools in

Michigan have been stressing team teaching in their middle schools and have been particularly interested in home room guidance. The Meredith G. Williams Middle School in Bridgewater, Massachusetts stresses a somewhat complicated system of both hetrogeneous and hemogeneous grouping according to the activity, subject matter, age-level, and I.Q. of the pupil. Middletown, Ohio, which incidentally follows a 5-3-4 plan, uses team teaching and blocks in English, Social Studies, Mathematics, and Science. Yet, there is nothing in any of these excellent schools that could not just as well be achieved under some other organizational plan. I do not think the case for the middle school can rest on improvement in instruction or curriculm. If new buildings are built, better layouts may lead to a better instructional facility; teachers and administrators may be encouraged to try innovations in instruction and in groupings. But these possibilities are not unique to the middle school.

I must temporize. When we consider the children themselves rather than instructional methodology, curricular content, or classroom organization, we might look for a pyschological basis for justification for whatever it takes to make the middle school a functioning reality.

On purely psychological grounds the major argument for the middle school has rested on the assumption that the middle school brings together in a meaningful and adjustive setting children who are developmentally not hemogeneous. At one end of the scale, it removes the fifth and sixth grades from the elementary school leaving behind a developmentally hemogeneous group of younger children free of the influence of the needs of the older, and therefore dominating, prepubescent group. At the other end of the scale, by adding the ninth grade to the senior high school, it places these youngsters in an adolescent setting which they need, at the same time removes the predominantly prepubescent middle school a group of adolesceents with whom the younger children are not really compatible. The end effect is supposed to produce a predominantly adolescent senior high school, a predominantly prepubescent middle school, and an elementary school free of pressures resulting either from the inclusion of adolescents or of those in a process of becoming adolescents. It is held that schools organized at three such levels would provide psychological climates most conducive to children's emotional and social development, motivation, and opportunity to prepare most meaningfully for the next school and for the next stage in their sexual-social development. Specifically, some of the psychologically based reasons advanced by the various writers in support of the middle school include the following:

1. It prepares children over a period of years to meet the crises of adolescence.

2. It avoids the tendency of the junior high schools to precipitate adolescence.

3. It conforms more appropriately to peer group and age-mate distinctions among students.

4. A transition takes place in the intellectual processes about the sixth grade.

5. It is at about the sixth grade that a physical change is beginning to occur and social and emotional needs become different.

6. Puberty tends to start at an earlier age in our generation.

7. It provides a very special environment in which pubescence can be experienced without trauma or trepidation.

8. It provides a situation in which seventh and eighth graders would not be competing with high school students for academic honors and places of leadership.

9. Developmentally, children in grades 6-8 are more alike than children in grades 7-9.

10. It helps to slow down the " growing up" process because from Kindergarten through ninth grade the oldest group is removed from each level.

11. Students in grades five, six, seven, and eight have common growth characteristics enabling the middle school to be managed better in terms of personality development than in any other breakdown. For example, social activities such as dating, dinner dances, and varsity athletics could be eliminated.

12. It provides a four year opportunity for children to pass through the "awkward" stage of maturation

and is, in effect, a school for "growing up."

13. It would provide children an earlier opportunity to explore their leadership and vocational aptitudes by participating in various student managed enterprises such as assembly programs, school publications, and student government.

These are interesting and if they are all true, advisable, or attainable only in the middle school there would be compelling reasons for its establishment. The difficulty is that they are not all true,some would create greater problems than they would solve, some are not really indigenous to the middle school, and some are hardly educational or psychological issues at all. For example, why is desirable to "slow up" the " growing" process and why does removing the highest group from each level result in such a "slow down ?" If it "slows down" the eighth grader by removing the ninth grader, why, equally, does it not accelerate the fifth or sixth grader by removing him from the elementary group and placing him with the older group of seventh and eighth graders. Isn't this robbing Peter to pay Paul ? Psychologically, it would appear to me desirable not to "slow down" the advance of maturity, even if I were to accept- which I do not- that dropping or adding a grade here or there would achieve the purpose. As a further example, why would one categorize the period of the sixth through the eighth grade as the "awkward" period of maturation, and why is there an assumption that adolescence is a "crisis" period ? One could make a case, supported by research evidence, that the proposed middle school years are not an "awkward" period of maturation and the crisis hypothesis of adolescence has had no standing in psychology for a number of decades. But these are only answers to isolated statements taken more or less out of context. There is bigger game afoot.

Throughout the psychologically based arguments for the middle school run twin assertions. First, the middle school and the four year high school are good forms of organization because they bring together people of relatively similar pubescent status. Second, these two organizational forms offer optimum climates for personal and social adjustment that are,presumably, superior to other organizational schemes.

These two arguments tend to ignore the fact of individual differences based upon each individual's possesion of a multiplicity of differential traits and backgrounds. They also seem to imply the possibility of a situational panacea for problems, many of which are more a figment of the imagination than an actuality in a well conducted school of whatever organization. There is also an assumption that one may use chronological age or grade placement as significant categories in describing behavior or in positing behavioral expectancies. Yet, one can do so only to a very limited extent. While chronological age has traditionally been the most popular means of classifying children it is not a very meaningful one- an external one at that- and it does not provide a true physiological or physical picture of the individual. Individual differences within any given age range are so vast that chronological age as such becomes meaningless as a comparative index, particularly if people of similar chronological age are compared. For example,a thirteen-year-old boy may be sexually mature and much more developed physically than a fourteen-year-old boy; however a ten-year-old girl may have proceeded much further along the path of physical development than a thirteen-year-old boy. Hence, there is general agreement that one's sexual maturity status offers a more useful frame of reference for the comparison of individuals than does chronological age or its closely associated grade placement.

It is true that writers discussing the middle school do speak of homogeneous grouping of persons essentially post-pubescent and pre-pubescent. But there is seldom any definition by these people as to what they mean by pubescence. One writer speaks of attaining pubescence while in the middle school, another seems to feel that this will happen later. Technically, a child is pubescent when he is able to reproduce his kind- shortly after first menstruation in girls and first ejaculation in boys. Actually, children are becoming pubescent in every year from the fifth grade through the twelfth and while one can strike an average and a standard deviation for each age, the range is great in any age and the average of advent of puberty is about one and one-half to two years earlier for girls than it is for boys. When it comes right down to it, many of the pubescence arguments for forming middle schools and dropping junior high schools are, if true, better arguments for dropping co-educational schools and substituting in their place unisex schools than they are for the purpose for which they were proposed.

It might be interesting to see what the pubescence situation in the middle school actually would be. Let us take boys for example. Table one shows grade, one through twelve, together with the cumulative percentages of those who have attained puberty by that grade. Assuming a 5-3-4 organization about 9 percent of the boys who enter the sixth grade are pubescent and about 11 percent more become pubescent during that grade. By the end of the eighth grade 6.5 out of 10 are pubescent. With such a dispersion how can we speak of the middle school as being primarily either pubescent or pre-pubescent and couldn't we build an equally good argument for placing the eighth grade with the ninth grade as we could for placing it with the seventh ? And what of the poor fifth and sixth graders ? Aren't we doing them just as much of an injustice by placing them with the seventh and eighth by placing them with the ninth ? The picture changes, of course, when we add girls with their earlier attainment of puberty. But, it seems to me, much of this is quibbling. Ultimately we deal with individuals. Groups do not learn. Individuals do. Groups do not become socially or emotionally maladjusted. Individuals do. The group has no existence apart from the individuals who compose it and we must be careful in juggling groups for administrative efficiency that we do not lose sight of the individuals who compose the groups. The real question that we have to ask is this: does it really make any difference if adolescents and pre-adolescents are housed together in a school geared to promoting learning as well as social and emotional adjustment ? Providing that the needs of each are cared for, there seems to be no particular reason for separating them. It is a matter of providing a good program for each student and for the immediate group with which he is most closely identified.

PERCENTAGE OF BOYS ATTAINING PUBERTY IN EACH OF THE GRADES IN SCHOOL

Grade	Percent Becoming Pubescent	Percent Not Pubescent	Cumulative Percent Pubescent
1	0.16	99.84	0.16
2	0.38	99.46	0.54
3	1.13	98.87	1.67
4	2.20	96.13	3.87
5	4.83	91.26	8.70
6	10.96	80.34	19.66
7	17.88	62.46	37.54
8	25.71	36.75	63.25
9	23.14	13.61	86.39
10	10.08	3.53	96.47
11	2.57	0.96	99.04
12	0.64	0.32	99.68

Adapted from Kinsey data

The crux is the program, not the school organization. Some school systems are better able to provide a good program through a middle school while others can do a better job in a three year high school. If teachers and administrators who operate a junior high school set it up in such a manner that they permit a given group of children on the basis of age, socio-economic status, race, religion, or whatever to dominate the school at the expense of everyone else, then why should it be supposed that these same people would run any school differently ? If the ninth graders were permitted in such a poorly run school to dominate the rest, why shouldn't we expect the eighth graders to dominate the rest in the middle school ? And I do not believe the creation of a middle school teaching certificate is going to make any difference.

What I have said about an individual approach where pubescence is concerned seems to me to be equally true for setting up a climate to promote emotional and social adjustment. From the time children are born, through a process of socialization and verbal mediation, children learn about themselves and their environment; they construct their personalities; they learn roles; they learn coping behavior; and they begin to build a concept of self which all through the first two decades of life they continually revise as they test reality. The construction of an identity is the main business of growing up and in this area as in no other is the matter of individual variation so great. The big question to ask about a child is: who does he think he is; where does he think he is going; what does he construe his world and the people in it to be all about. Further, what are his coping behaviors, his anxieties, his interpersonal skills, his roles, and his motivations. In these matters, the differences within a grade or within a group of grades is just as great or greater than between grades or groups of grades. Of course, we can set up motivational and cultural expectancies for any category we wish to posit, but the limitations are severe. I simply can not see that any school organization is going to arrive at any really significant homogeneity. There may be many good reasons for forming the middle schools, but they are not psychological- at least where the children are concerned.

In summary, I would say that while many of the psychological and methodology-of-teaching reasons advanced in defense of the middle school are quite valid, it can not be assumed that their attainment is confined to the middle school organizational pattern. It is quite possible that many elementary and junior high schools could gain the same advantages by making adjustments in the present administrative organizations and methods of teaching. As a matter of fact, many have, and have been doing so long before the middle school was suggested. That the middle school can do a better job because of its organization is at the very least moot. I think that it is fair to say that along with the assumption that a proper environment can facilitate the learning process of the child goes the converse that there is no one "proper" environment for every child and that even with the best environment will vary from time to time with the same child. Vars put it very well last year when he wrote, "Neither changing the institution's name or moving its grade level brackets up or down a notch will necessarily affect the character of the education it provides."

At this point I do not need to tell you that my impression of the middle school as a psychologically tenable unit is not particularly favorable. I realize that it is easy enough to tear down, and much harder to build. Under the circumstances, I should perhaps indicate what I would advocate. First, I would not necessarily abandon the junior high school for for something that may well be no better and which has been advocated as capable of achieving ends in a setting that I think would actually preclude attainment of many of these ends. I would do considerable research with existing middle schools before I would proceed further. We must remember that when we consider the middle school we have to ask what it can do better or what it can do that can't be done whether in existing schools or some other organizational pattern that might be conceived. When all is said and done I believe that if we were to base a school upon truly psychological factors we would have to abandon placement of individuals together on the basis either of chronological age or grade in school, substituting instead various personal criteria for the groupings. For example, pubescent status, social-emotional environment, educational attainment, general and special abilities, and various personality components such as diffusiveness of identity. Since these variables are not necessarily highly correlated we would find ourselves wanting to put individual A in one group in terms of pubescent status, in an entirely different group in terms of intelligence and in still another group in terms of social or emotional adjustment. But, even so, combinations of these variables, however imperfect, would give us a better and more workable picture than chronological age and grade placement.

In conclusion may I remind you once again that my remarks treat only with the middle school from the methodological and psychological side. It may well be that administrative and other issues would present a different story, but I would still maintain that the personal welfare and learning of children are the main reasons for the existence of schools.

INTRODUCTION TO THE SPEAKER

DR.THEODORE FOSSIECK

In considering any innovations one of the first considerations must be the establishment of a rationale for the change. In what ways should the Middle School be different from the traditional junior high school ? What should be the purposes of a Middle School ? Should there be changes other than the relatively simple grade changes from seven to nine to five or six to eight ? It is extremely important that a basic rationale and philosophy be established so that as school districts institute the change to Middle School they will be basing it upon a firm foundation of theory rather than on the quicksand of expediency.

Few people are better qualified than Dr. Theodore Fossieck, principal of the Milne School, the campus school of the State University of New York, at Albany, to speak on the topic, Purposes of the Middle School. He has devoted his time recently to the theoretical framework of the Middle School, and during his sabbatical year visited many Middle Schools both in the United States and abroad to combine empirical strength with theoretical background.

PURPOSES OF THE MIDDLE SCHOOL

THEODORE FOSSIECK

Like the elephant being described by four blind men, each of whom thought of it in terms of his own limited experience, middle schools are often described differently by different people. The difference between us and the blind men is that we are aware of the need to synthesize the knowledge which we gather from several sources in a coherent whole, and we hope that by the end of this week you will have a better understanding of this animal "The Middle School."

There are any number of ways in which a discussion of the "Purposes of the Middle School" may be organized. This afternoon I have chosen to discuss some of those purposes in terms of the four groups who are most affected by those purposes- the pupils, parents, public, and professionals, so that you may subtitle this discussion, if you like, "Four Peas in a Pod."

At the outset it would be well to establish our frame of reference for the discussion. I would hope that we can prevent some of the confusion which often arises in educational discussions when the same term is used to designate several different ideas. This practice is regrettable when only one term exists, and it is inexcusable when several terms are available especially when some of them have clearly defined and accepted definitions. Since we are here to discuss a different animal from the "junior high school," we ought to attempt to arrive at some agreement on the characteristics of that animal, "the Middle School." The point of view expressed earlier that the term "middle school" , should be reserved to designate a particular school organization with a particular philosophy is an excellent one. If I got the message of what this "middle school" is, I believe that it is a school including grades 6 through 8 with an enriched general educational program emphasizing basic skills and attempting to meet the needs, interests and abilities of the eleven to fourteen year old girls and boys who would attend such a school. The philosophy of such a school has been well slated by the staff of the Meredith G. Williams School of Bridgewater, Massachusetts. In essence, it encompasses a program which would provide experiences for each child at his own level. It takes into account encouragement for the slow learner, improvement for the average, and challenges to the bright child.

The Barrington, Illinois, Middle School indicates that it is attempting to provide curriculum which enhances exploration, and which can operate in a flexible educational program. The program is basically designed to meet the natural demands of the eleven to fourteen year old boys and girls.

The terms, "intermediate school" and "junior high school" should be reserved in my opinion to describe schools including grades 5-8 and 7-9, respectively. If they meet the second definition of the Middle School philosophy, I would leave the designation of them to the educational researcher who is more concerned with finding the proper cubbyhole for each unit than in what is happening to the people being served by that unit. I would be the first to admit that changing the name over the entrance or changing the grades housed in a given building does not automatically produce a middle school.

One conclusion reached early in a consideration of the purposes of middle school is the obvious one, but one which should be stated to help establish our frame of reference, that many of the purposes of the middle schools are not unique. What makes middle schools unique in addition to some of their purposes is their approach to the purposes accepted for them. My function this afternoon is not to tell you how middle schools will accomplish their purposes but to lay the framework for your later discussions on good and workable ways of achieving some objectives which I will present and perhaps some others that I may not get around to presenting.

As I indicated to you earlier, there were several ways that I could have organized this presentation, and I have chosen to look at the "Purpose of the Middle School" in terms of the four groups most concerned about the purpose of such a school: Pupils, Parents, Publics, and Professionals.

First of all, let us look at such a school in terms of its pupils. During the remainder of this week you will have the opportunity of hearing in much more detail the characteristics of preadolescents and early adolescents who are found to be in grades six to eight. Probably the two most outstanding characteristics are those being in a state of change and exhibiting extreme differences in whatever characteristic you wish to name. The middle school accepts as a primary purpose the response to and development of its student body's needs, interests, and abilities which differ considerably from those of elementary and high school youngsters. The Barrington Middle School was designed to meet the problems caused by the uneven growth problems of children in the areas of social, physical, emotional and intellectual development. This design lent itself to the initiation of the concept of an exploratory curriculum which would operate in a flexible educational program.

These youngsters are actively engaged in the process of developing from children into adults. They need to find their places and develop into functional beings in four distinct but overlapping areas: as an individual, a family member, a peer group member and a citizen. In all these roles, they react physically and emotionally, as well as intellectually. The middle school through its child-centered exploratory program, removed from the precedents and examples set by the ninth-graders and free from the career and college pressures of high school, should be able to assist its pupils in developing the competencies which both they and our society feel they need.

Let us look at the impact of the purposes of the middle school which each of these needs creates. A primary need is that of becoming effectively an integrated person. The school has the choice of using this felt need to help build its program or to motivate the youngster strongly enough that he will delay meeting his own felt needs until after he has met the needs which the school is pushing. If the middle school proposes to aid the child in meeting this need, it must provide experiences designed to assist him to understand and accept himself. Acceptance of oneself involves adjusting to the facts of one's own physical and emotional characteristics, and scholastic abilities, that cannot be changed, and accepting the responsibilities involved in a program to change those things which can be changed. We have all seen the "Tomboy" who finds it hard to forgo the delights of her comradeship with the boys in favor of the unfamiliar pleasure of developing her feminity. We also have seen cases of the boys who in spite of all their bravado and self discipline find themselves crying when they get really angry. These children are passing physically, emotionally, and intellectually through the developmental stages at which a child matures into an adult, and they must be helped to understand, as well as to accept, those changes which are occurring to them. The entire school program, and particularly science classes as well as group and individual guidance activities, should be organized in a middle school to accomplish this purpose.

An effectively integrated person not only accepts himself physically, emotionally, and intellectually, but he also needs to know what he is capable of becoming. Middle Schools attempt to fill this need by providing opportunities for the students to explore both intellectually and empirically their strengths and weaknesses. The entire curricular and extra-class activity program should be devoted to these ends, and it can be when a middle school is freed of the distractive influences of the high school and the program is directed toward the developmental needs of its students. As Dr. Clute said this morning, "The period for being grown up is much longer than that of growing up." Let's make good use of this limited time ! For example, well-planned guidance programs integrated with subject areas can meet this need by assisting the youngsters to understand what tests have shown about them. Middle schools can and should extend to the youngsters the New York State philosophy that guidance records should be made available to the parents, which of course carries the implication that raw data is always interpreted by those who have collected it. I concur heartily in the philosophy that school records should emphasize positively the achievements rather than enumerate all the failures of a student.

Middle schools should assist the student in understanding himself and his potentiality by providing truly exploratory experiences. Exploration was one of the original purposes of the junior high school, but over the past thirty years its purpose has changed considerably. Two reasons were originally advanced for the exploratory function of the junior high school: First, there was an attempt to motivate youngsters to attend high school by exposing them to experiences in the junior high school in which they were successful or in which their interests or enthusiasm could be stimulated sufficiently to motivate high school attendance. Secondly, there was the objective of assisting students in a more objective selection of high school courses. Since most youngsters attend high school today, it is the second function of exploratory courses which today meets the needs of the middle school youngster. Any one of the courses in science, foreign language, art, etc. may be used as an example of the advantages of a middle school program aimed at the needs of the youngsters. Take for example the teaching of a foreign language. If we free these courses from the subject matter limitations of traditional beginning high school courses, imaginative teachers using a wide variety of techniques can give students experiences in which they can be successful in all aspects of a language and they can take time to assist unsuccessful children in finding the causes of their difficulty, as well as to assist students in realistically selecting high school courses. These objectives must be programmed, as our computer friend would say, into the course and the success of the course judged as much on them as the proficiency with which a youngster speaks or reads a language. Although we do not practice acceleration in both math and foreign language in the Milne School for some youngsters, it is a practice scheduled for review by our curriculum committee next year and it illustrates perfectly both the dominance of the high school program in a junior-senior high school and the possibilities of independence of a middle school.

A second important need for the youngster of middle school age is for assistance in defining and developing competency in his functioning as a member of his family group at this particular time of his life. All of us are familiar with youngsters of this age vacillating between desiring complete independence of family at one minute and then retreating to the security of the family situation the next. Through all its activities, and especially the group and individual guidance facilities, the middle school should offer opportunities for the child to find sympathy and understanding as well as the comfortable experience of learning that others of his peer group have the same problems, and possibly some answers to such problems as getting along with parents, siblings, and relatives, of being treated like a child, or being given little or no attention at home. While many of the activities involved in achieving this goal must be provided by the family in the home setting, the school in working with the whole child must be aware and take account of the tensions which may develop in the course of meeting this need.

Becoming the accepted member of a peer gorup is the third major problem faced by students of middle school age. The problem has a number of facets ranging from how to be at ease in all kinds of social situations with the boys and girls to the amount of conformity which one should undertake with one's age group. Youngsters of middle school age have indicated in surveys their concerns about how to meet people, how to dance or keep a conversation going, and how to dress and entertain acceptably. Closely related are all of the questions about dating and marriage about which young people begin to think as they undergo the onset of puberty. A child-centered curriculum in the language arts, supplemented by a good group guidance program, can do much to help youngsters find satisfactory answers to these questions.

Through its extra class activity program the school can provide situations in which these necessary social skills can be developed, and it can place this aspect of the child's education in proper perspective by designing activities which are appropriate in both scheduling and in nature. Some middle schools limit their social activities to members of a single grade,so that sixth graders are not expected to participate in the same activities as eighth graders, and vice versa. This reminds me of a remark by a principal of an intermediate school, grades 5 through 8, who was asked how they took care of that age range at an evening affair, and he said that they just opened the whole building so that the 5th graders could run up and down the halls, while sixth graders played games with their own sex, seventh graders sat and looked at the opposite sex, and the eighth graders danced. A number of middle schools have found that these goals of developing social skills were more effectively achieved through informal activity scheduled immediately after school, rather than in the evenings. Middle schools emphasizing the child-centered curriculum attempt to plan such activities to produce an atmosphere of normal, every-day, casual participation. When physical education classes are conducted on a coeducational basis for some activities like square dancing, it is a short step to widespread participation in extra-class social affairs.

Meeting the need for adequate and acceptable social performance is an area in which every effort should be made to establish both a philosophy and practices which are understood, accepted, and supported by both home and school so that one can reinforce the other. Cooperative planning and operations of such affairs involving the students, parents and the school is educationally and psychologically sound.

Becoming an effective citizen of both school and community is the fourth area of major concern to middle school age youngsters and one which the school program should be designed to assist the youngsters in meeting The early adolescent is deeply concerned about the choices he must make about what to believe, in which religious and social activities to engage, and what are his responsibilities as well as the privileges of citizenship. An important purpose of the middle school should be to assist the students in developing a set of moral values and practices which will make them contributing members of the school and community.

Encouraged and given the opportunity these youth will readily engage in patriotic, service, and religious activities which may well set the pattern of many of their future actions. The school should provide opportunities for these adolescents to gain experience in the service aspects of school citizenship, which may lead to additional practice in community activities. In extending the concepts taught in social studies and the language arts, the group guidance and extra class activity programs can be very effective. The total school programs must be designed to make participation in these service and citizenship activities the normal, acceptable mode of behavior.

Summing up what we have said thus far, the middle school must design a program aimed at meeting the needs of its youth as individuals, as well as members of families, peer groups and school and local communities. In doing this we should keep in mind Ruth Strang's generalization of the needs of this group when she alluded to the chief phenomenon of adolescent development as being the problem of establishing a concept of self. Dr. Strang also discusses the needs of the adolescent. He has a need to maintain affection and to have a feeling of security with people in his immediate personal-social environment; a need to have a personal philosophy; a need to establish a feeling of worth which comes through achievement and which will also make him acceptable and successful in adult society.

One could go into considerable further detail about how to organize a middle school which proposes to satisfy those four needs of its pupils, but you will have the opportunity throughout the week to hear some experienced practitioners in the art of the middle school administration tell you how they are doing it.

Now let us move on to the second group which will help determine the purpose of a middle school- the parents. Parents see the primary purpose of a middle school as the provision of the educational background basic to the successful continuation of a child's educational career, as well as the development of certain social and physical competencies.

First of all, parents expect the middle school to give their children the background, knowledges, and skills required when the youngster enters a subject-oriented high school program. Parents assume that each level of the school program will give first priority to meeting the requirements of the next level of the school program. While middle schools will do well to resist the efforts to push specialized courses downward into it so that the high school can teach beginning college-level subjects, parental support for middle schools is frequently aroused by the promise that a middle school will permit students to have the advantages of academic specialists and more advanced equiment and facilities (usually in foreign languages or science) a year earlier than is possible with the usual junior high school organization. We would hope that the middle schools built with this premise would plan the use of these facilities for exploratory rather than acceleration objectives.

While the middle school must assume responsibility for the academic transition which is required of its students, it must at the same time offer a curriculum and subject matter of its own choosing which will permit it to achieve the purposes represented by the needs of its pupils. There will be some areas on which it must take a stand particularly one that the high school will have to accept the students where they are as they come from the middle school and move on from there-a practice to which high schools have been giving lip service for years.

The educational skills which parents expect middle schools to assist their youngsters in developing are those which will enable him to learn efficiently.

These include reading, writing, speaking, listening, computing and studying. Each of the middle school subject areas must develop the skills particularly appropriate to it and reinforce those of the other disciplines. Every teacher must be a teacher of spelling of the entire vocabulary of his particular subject discipline. Each teacher must motivate his students to express themselves clearly both orally and in writing on the subject under her guidance.

The social skills that parents expect their youngster to achieve in the middle schools are the ones which we have discussed previously as meeting the youngster's needs to develop into a contributing member of his family, peer and community groups. The hope and desire of slowing down the social development of pre-high school youngsters has moved many parents to support the concept of a middle school housed in a separate building and conducting it's own extra class-activity program in terms of the children's needs, rather than in terms of aping the senior high program. Many parents would like to see reduced the social activities involving dates, corsages, evening dresses, and other trappings of senior high affairs so often copied by junior high school students, and encourage by a few mothers and father reliving their youth through their children, or unable to cope with the child's excuse, "Everyone's doing it."

The physical competencies, like social ones, which parents expect middle schools to teach should be those appropriate for the developing child. He should be assisted in developing basic skills with recreational activities such as bowling, tennis, golf, archery, and winter and water sports which will enable him to make good use of the increasing amounts of leisure time which are predicted for the coming decades. The middle school should also teach youngsters to be intelligent spectators of team sports. If time permits, a limited amount of intramural participation in team sports should be provided for all. However, the middle school can and should take advantage of its separateness and uniqueness to avoid like the plague both parental and professional pressures for using the middle school time and facilities as a "farm team" training ground for potential high school athletic teams, or to develop middle school "varsity" teams to compete with other schools. The same thing goes for marching bands and all the other activities which junior high schools have copied from senior high schools.

Closely associated with these physical competencies are the extra-class cultural activities. Middle schools should assist their students in becoming intelligent spectators, and to the extent that it contributes, meeting their needs as developing persons, spectators, in such areas as music, drama and the dance. Again the emphasis should be on the development of attitudes and skills which will contribute to the worth while use of leisure time rather than the production of professional artists. It is to be hoped that these activities can be carried on so that instruction and practice sessions are enjoyable and personally satisfying. Deferred rewards and satisfactions do not meet the needs of of middle school age youngsters and are very ineffective motivators, and parents must be helped to understand that a polished performance is not the sole criterion of an effective school program.

Thus far we have looked at the purposes of middle school as seen by two groups - pupils and parents- vitally interested in and affected by those purposes. We have tried to emphasize the need for a program based on the interests, needs and abilities of the youngster at this stage in their personal and educational development. Now let us turn to the third group instrumental in establishing purposes for the Middle School-- the professionals and practitioners- the staff of teachers, professional specialists, and administrators.

The professionals would give first priority to those purposes which the pupils and parents have indicated as desirable. The profession accepts its responsibility to assist people to do better the things they are going to do anyway, but it retains its right and responsibility for exercising leadership for improving the behavior of its clients. There are two additional purposes served by middle schools which originate with or are primarily implemented by the professional staff. One is the leadership shown to the profession in developing educational techniques which are more effective than present ones and which can be adopted by other levels of the educational program. Both of these call for much imagination and initiative on the part of the staff.

Middle schools have an unique opportunity within the educational community to improve and possibly enlarge the curriculum offered by the schools. Strategically located between the elementary schools with their emphasis on basic skills and the high schools with their emphasis on subject matter, the middle school has the greatest freedom to revise its curriculum in terms of appropriateness for not only the age level but the period in history of its students. Faced as is any educational system with a maximum amount of available student time, the middle school must be continually alert to the development of new and the disappearance of old needs, in order to update its offerings.

The field of mathematics offers an example. Here the topic of computers must be considered to determine if any aspects of them are appropriate for inclusion in the learning experiences of the middle school group. Assuming that this topic is found to be worthwhile, it poses the problem of determining what topics currently offered should be de-emphasized, which might be the findings of square roots or computing volumes of cylinders, for example.

Foreign language and consumer education are two subjects which were given little consideration for inclusion in the curriculum when the junior high school was introduced, but their possible and relative contribution to meeting the needs of today's youth and future citizens must be weighed against the contributions which some of the long entrenched subjects may have to offer. Likewise the content of present courses must be continually reviewed for its appropriateness. The committee of citizens studying the question of a possible middle school for Mount Kisco, New York concluded:

> What the contemporary and future citizens of Westchester County need in this area (of practical arts) are not lessons in "cocoa making", the pleating of chintz curtains, or hammering together of book-ends and footstools, but an understanding of the aesthetics of design for the home and some knowledge of how the television set and power lawnmower work.

Since many parents are not as forward looking as those of the Mount Kisco area, and other suburban areas which have pioneered in the introduction of middle schools, the school staff must act as the catalyst in the process of improving the educational program.

Development of new techniques of instruction again is the responsibility of all segments of the educational program, but the middle school should make use of its freedom to pioneer in these activities. One major advantage of the middle school organization is that it provides a three year period devoid of the limitations of the Carnegie unit in which the children and the staff can get to know each other and to work together to achieve pupil-centered purposes. Large and small group instruction, programmed learning, individualized programs, and upgraded programs are examples of educational techniques whose effectiveness have been thoroughly demonstrated in middle schools and have been adopted by forward looking elementary and high schools.

The fourth group having a part in determining the purposes of a middle school is the public, represented by its board of education-the prescribers of educational practice in the schools which they support. Just as each of the previously described groups may originate some purpose to be met by the middle school which may not be felt strongly by the other groups, so the board of education out of its experience, sensitivity to the local pulse, and/or the charge given to it by the state may deduce some missions or purposes for its schools, whether they be middle schools or some other organization. Some of these purposes may be educational, but all of them have impacts on the educational program of the school.

Boards of education may be forced by the State to prescribe certain purposes for middle schools which do not particularly meet the needs felt by other groups. For example, state legislatures have enacted laws requiring that information concerning such topics as alchohol, drugs, health, and citizenship must be taught. Commissioners of Education through their departmental regulations have added other curriculum requirements. These all effect the school program and must be related to the purposes of the school as seen by pupils, parents and others.

All schools, not middle schools only, may sometimes be organized to serve the purpose of implementing social service or political objectives. One state desiring to insure good health for its citizens may require the provision of dental care in the schools or hot lunches for indigent children. Other states desiring to integrate different socio- economic and/or racial groups may organize the schools for this purpose. It is alleged that the reason for the replacement of the junior high school organization in New York City is population. This integration objective has been given as one of the reasons for organizing middle schools in other communities.

Another purpose for middle school organizations which appeals to some boards of education is that of economy. While middle school programs may be more expensive in terms of specialized staff members and equipment than elementary schools,they are often less expensive than high schools, and provisions of specialized equipment and services in one middle school may be less expensive than providing the same service to each elementary school with a sixth grade. Some boards of education have found that they can reduce the number of high schools, or make more efficient use of the high school staff and equipment with a student body in grades 9 through 12, if they build middle schools to distribute the school population in such a way as to provide the most economical educational program in the entire district. Similarly, boards of education sometimes have included grade six with the seventh and eighth to use efficiently the special teachers required by a comprehensive traditional junior high school program.

In summary then we have said that the middle school is a distinct and unique organization which emphasizes a child-centered curriculum designed to meet the needs, interests, and abilities of pupils in grades 6 through 8. We have taken each of the groups involved with the schools--Pupils, Parents, Public, and Professionals--and have attempted to review the purposes which each of them would want served by a middle school. We think that the chances of these purposes being accomplished are better under a middle school organization than with the traditional junior high school or some other administrative arrangement.

INTRODUCTION TO THE SPEAKER

WALTER PAGELS

Although theory is extremely intriguing in all of its aspects, many administrators are concerned with the application of the theory. One of the problems of the traditional junior high school was the inability of educational practitioners to bring to fruition many of the fundamental beliefs of the theorists. Pragmatic problems have always faced the junior high school administrator. College entrance requirements, the Carnegie Unit, unrealistic parental expectations among others have forced re-evalutions of basic educational policies in many instances.

In an attempt to explore basic ideas inherent in the middle school movement, Walter Pagels, the principal of the Barrington Middle School in Illinois has been invited to speak to various aspects of the development of the middle school concept and its pragmatic application in his school setting. Mr. Pagel's experiences in the development of a new middle school should prove extremely instructive to other administrators facing many of the same problems.

A MIDDLE SCHOOL IN ACTION

WALTER PAGELS

Middle schools have been described and defined in many different ways- as a school between elementary school and high school or as a school that allows the pre-adolescent, with his need to be dependent, to move more smoothly into adolescence with his need and desire to become independent-or, as a school that is a link between primary schools concentration on basic skills and the high schools increasing opportunities for specialization. In any case, it is a school with opportunities for exploration, a school dedicated to serving early adolexcents.

Adolescence itself has been described many different ways and almost any way of describing an adolescent seems to be correct. Psychiatrists might say it is the most emotional phase and invention of western culture. Others define the adolescent as marginal men- neither child nor adult--with the following characteristics:

1. Emotional instability.
2. Sensitivity.
3. Unbalanced behavior.
4. Too much tension.
5. Vacillation between eextremes of contradictory behavior.

One of the most apt descriptions of an adolescent is:

"Confused by self-doubt, plagued with forgetfulness, addicted to extreme fads, preoccupied with peer status, disturbed about physical development, aroused by physiological impulses. stimulated by mass media communication, comforted by daydreams, frustrated by restrictions, loaded with purposeless energy, bored by routine, irked by social amenities, veneered by "wise cracks", insulated from responsibility, labeled with delinquency, obsessed with personal autonomy, but destined to years of economic dependency."

In short, one might say, like the popular song, adolescents are "bewitched, bothered and bewildered." Junior High's in the past and now middle schools are starting to serve this group. As administrators, we must be cognizant of the past performances of the junior high school and of the values of the emerging middle school pattern. I think many of us recognize that even with impressive lists of objectives and goals our junior high schools have not met them and that in the past, junior high schools have been just that- junior or little high schools. In fact, it can honestly be said that in some cases, a junior high school was an introductory high school or at best, a prep school for high schools, often including many of the activities best restricted to the older adolescents. A little over 50 years ago the junior high schools were started because of a wish to extend secondary education downward. It is said in some quarters that middle schools are now emerging because they may:

1. Help solve the racial integration problem.
2. -Colleges are demanding a four year sequence
3. With the continued movement toward consolidations, larger schools are being built.

Where does this leave us ? It puts us in a position of trying to do a better job than the old junior high school no matter what the reason for the emerging middle schools. It also presents problems and challenges administrators to design schools and programs in which the curriculum emphasizes the process as much as the product= a curriculum that calls for action since the very nature of the middle school student demands activity-- a curriculum where problem solving and the development of attitudes and skills will help solve problems of the future. All of this is not easy because the teaching staff for many middle schools have not been trained for middle schools. There is not the same emphasis in teacher training on middle school education as there is on secondary or elementary education. This means that administrators must work with colleges and universities to provide better training specifically for middle school teachers. It means also that administrators must reeducate teachers presently on their staff through an active in service prgram. It isn't enough that I have traveled to see Nova High School in Florida or Ridgewood and Lakeview High School in Decatur, Illinois. It isn't enough that our Director of Instruction has traveled to Newton and Lexington. As a matter of fact, it may well be too much because rather than having administrators travel, it would have been better had these trips been made by teachers so they could see firsthand change and the results of change. I suppose if there are things that an administaror of the new middle school must do-

1. He must become a change agent.
2. He must inspire and excite his faculty.
3. He must subtly point out that old programs might be like"the old grey mare just ain't like she used to be.
4. He must encourage his teachers to be innovative and to try new ideas.
5. He must never say as I'm sure we have all done, "Oh, we started something like that years ago."

While we are talking about change, it should be pointed out that once there is a climate for change, you should make no little changes. Changes should be bold and far-reaching. Little change is too restrictive while big change allows for significant results.

What are some specifics middle schools might do ?

1. They might individualize a program for students because unlike the senior high schools, they are not tied to Carnegie unit.
2. They could go non-graded. After learning the basics in primary school, a middle school child could progress at his own rate through exploratory phase before getting to high school.
3. They could effectively use team teaching. If we are to remain flexible and meet the students' needs, we must also use teachers flexibly and use those things that teachers can contribute successfully.
4. We can use laboratories imaginatively to reach students with special needs.
5. We can use program learning to accelerate the rate of learning for individual students.
6. We should make use of our libraries effectively and make them more than just storehouses of books.
7. Lastly, middle schools must set up the program so that children will work and can work independently.

All of these seem like a large order but it can be done and is being done in many, many places, but not nearly enough. Administrators must go out on the limb and start standing for something for the good of the children.

INTRODUCTION TO THE SPEAKER

DR. WILLIAM ALEXANDER

As is true of many educational innovations, differing ideas have been expressed concerning the Middle School movement. Questions have been raised concerning such basic issues as even the grades to be included. Should the Middle School include grades five to eight or six to eight? What differences, if any, would be found in the functions and purposes of these two grade organizations? A statement of the purposes of the six to eight Middle School has already been brought to our attention. At this juncture we should investigate some of the fundamental premises of the five to eight Intermediate School to investigate possible differences between the two.

Possibly no person in the country is more qualified to speak about the five to eight Intermediate School than Dr. William Alexander from the University of Florida. Dr. Alexander, who is nationally known for his work in the general field of curriculum, has written numerous books in addition to countless speeches and journal articles. His most recent work has been devoted to the purposes of an Intermediate School of grades five to eight. His rationale is accepted by many as being the definitive statement concerning the functions of the Intermediate School.

PROGRAM AND ORGANIZATION OF A FIVE THROUGH EIGHT MIDDLE SCHOOL

WILLIAM M. ALEXANDER

I was, of course, very pleased and delighted to have an opportunity to be here in your New York State, and particularly at this conference on the middle school. As one who, in the last few years, has been raising some questions about the characteristic organization of our shcool system, it pleases and interests me to know that so many institutions and so many school people are responding with questions of their own--that they are interested to take a look once again at the continuity of education from school entrance to school termination and to think about what is the most appropriate program for different levels of schooling.

I would like to make it clear that in coming to talk with you, I really have no ax to grind, nor program to promote. I have some considerable interest in this matter, and I think possibly it is appropriate to take a little while to tell you what these interests are and why they are. I am not at all certain of any categorical answer to the question of what school really should bridge the elementary school and the high school. As a matter of fact, may I point out to you that throughout our educational history, many communities have had no in-between school at all.

It has been only about 50 years since our first junior high school was opened, and already this institution has become a very large sector of our educational establishment. During these past 50 years, increasing need has been felt for some kind of school to bridge the elementary school and the high school. And so I think I might appropriately entitle what I have to talk to you about, "a school to bridge elementary and high school," or " to bridge childhood and adolescence." I could not help reflecting, as I flew in here last evening, on the changes that have occured with regard to this question in the last three years. It was exactly three years ago this month that I flew to Cornell University to address a conference sponsored by the junior high school group there on "The Changing Junior High School." At that time I talked about the desirability as

I saw it, of some reorganization of the junior high school into a middle school. I remember that at the conclusion of that conference, two people spoke to me about organizations that were occurring in their district. Now there may have been more in New York State, but I only learned at that time about a couple. It was the following fall of course, that the committee in New York released the report recommending a 4-4-4 type organization for somewhat different reasons. This timing was sheer coincidence, for I knew nothing of that committee report, and I am sure the committee knew nothing of my speech. But during these three years that have elapsed, there has been quite a movement away from the 6-3-3 organization in your state and in other states, particularly in this section of the country. I know today when we talk about a middle school organization, the idea is not quite so novel, and there are more persons with experience, or interest in the school. My fear is, and I say this quite deliberately, that we may be going into too much of a bandwagon type movement without the careful reflections, discussions, planning and organization needed to have a better school program.

And so it is significant that you people have come together this summer to reflect about what kind of school program and organization you need. Three years ago when I talked for the first time in my experience on the need for reorganization of the junior high school, again today when I talk to somewhat the same topic but in a somewhat different context, I am motivated primarily by three reasons. I think I would like to explain these educational reasons because I am not suggesting that a reorganization is needed to solve building, enrollment, or desegregation problems, or any of the other problems that are not really related to the educational program itself, regardless of how important they may otherwise be.

My first reason lies in a very strong belief, shared I am sure by everyone here, certainly by the majority of American educators, that we must have a continuous program that takes youngsters from school entry to school termination, and in these years, helps each boy and girl move somewhat gradually from dependence in his learning activities, to independence. If I could have my wishes, and I think I speak for all of you, I would want every youngster who graduated from an American high school to have become so well educated during these years of progress from the first grade or kindergarten or the pre-primary grade, wherever we pick him up, that he is now able, really and truly, to continue his own education. The one fact that seems inescapably clear, as we look towards the last third of the twentieth century in America, is that the individual who succeeds, socially and personally, will be the individual who is able to continue learning on his own. There are certain realities of the present and certain probabilities of the future that do make ours a learning society in which a growing number of individuals will be spending more and more of their lifetime in a highly active, highly motivated pursuit of learning.

I point to three factors. First, there is a strong and wonderful movement, with all of its problems, toward a new recognition of the rights of each individual in our society, including the right to the best opportunities possible to continue learning on his own. Some of our new educational programs show a new concern for the culturally deprived and many other members of our society. And we may be, for the first time, putting into educational action a very beautiful philosophy of education of living that is summed up for me in a very brief quote from Goethe: "If you treat an individual as he is, he will stay as he is, but if you treat him as he ought to be and could be, he will become what he ought to be and could be." I believe we are attempting, these days in education, more satisfactorily and more adequately, despite all the problems involved, to treat individuals more as they ought to be and could be rather than as they are. And as we do this, we are helping these learners move into their full status and place in the learning society of our country.

The second fact that points to the necessity of developing each individual to the point where he will learn on his own, is the familiar constellation of facts which we loosely call the knowledge revolution or the knowledge explosion. I won't bore you with all the statistics, for you and I have only to review our own lifetime to be impressed with the rapidity of change and with the added expansion of knowledge. It is impressive to recognize that on the average every ten minutes some new invention is patented by the U.S. Government, and that every day 2,000 pages of new information are released by the presses of research organizations, business, industry, and government. It is inescapably clear that the growing body of knowledge is such that we cannot possibly expect to teach children all they need to know--the most we can do is to teach them what they need to know in order to learn what they need to know when they need it.

And the third fact that points to the necessity of training people to learn on their own is that of occupational change and mobility. We are told that the typical youngster now in school will engage in three different work careers; because of the changes in our society and in occupational patterns, we cannot possibly expect to train the average youngster while in school even for his first career. We can merely get him pointed to one or more careers, and expect him to be able to carry on his own training and retraining thereafter with the aid of schools, industrial training programs, military programs, and university professional schools.

So I emphasize that today there is need for a new educational program and organization to provide more continuity in education--a continuity which will help every student to be capable of learning on his own by the time he completes school. The second reason that I lean toward a new school organization has to do with the facts of human development about which you heard this morning. To me they suggest that any type of school organization must be highly flexible. It must encourage each individual to work up to his own capacity without artificial barriers between school levels and school buildings. Everything we are able to put together in our growing body of knowledge about individual growth and development points to the wide diversity of individuals, to the great differences in aspirations and capacities of the individuals we teach.

Let me just mention a few of these facts. For example, when intelligence is measured and converted into age units, the range among the first graders who will enter your schools this September will be about four years. Actually in a random population 96 out of 100 children will vary from 4 to 8 years mentally, with 2 below 4, and 2 above 8. We also know that this range of ability will widen as they continue in school so that by the time these children have reached the 8th grade, you may expect a range of from 9 to 10 years in their ability. We also know that similiar differences are found in their achievement in the various subjects. By the 7th grade, we can confidently expect a range between individuals of some 8 years in their achievement in the different subject fields. Furthermore, the range of achievement in various subjects by the same individual also may be great. To the extent that the range of intellectual differences among children is an argument for nongradedness (and it is the main argument, of course), there is much more basis for non-gradedness in the middle years than in the primary ones. But this is not the most obvious type of difference in the middle school years. It is the phenomenon of puberty which begins to appear in these years that most sharply accentuates differences among individuals. Some girls achieve menarch in grade 5, although a few girls and more boys will not reach this stage until the high school years. Although the differences between the sexes is pronounced, there are also marked differences as to the time of attainment of puberty within the same sex. And so children of ages 10 to 14 exhibit very marked differences in their physical, social and emotional development. By age 15, about 85% of the population have become pubescent, and a relative degree of homogeneity related to this factor is evident as adolescents enter grade 9.

The wide range of differences among children between childhood and adolescence points to the necessity for a flexible type of school organization rather than one that is fixed and sacred.

The third group of factors which lead me to conclude that some organization other than the 6-3-3 organization, as we know it, may be better, are certain practices characteristic of this now traditional organization. It simply does not seem to have provided well enough the continuity that we need in education, and it tends to be out of joint with today's levels of human growth and development.

Any educational organization serving children from ages 5 or 6 to about 18, ought to have three fairly distinct levels. One would be the level of childhood education which we have thought of as the elementary school. At the other extreme is adolescent education which we have usually defined as the job of the high school. In between childhood and adolescence, there is the need for a third level of education which would be middle school education or education of the in-between group: the older child, the pre-adolescent and the early adolescent.

When we examine the programs characteristic of the 6-3-3 plan, I think we definitely see some flaws. First, looking at the junior high school, it was, of course, established back in 1910, as a school to serve the in-betweens; it was to be a transitional school, from elementary to high school. But other reasons for the junior high school became more compelling: to save time, to eliminate the inefficiency of the 8th grade of the old 8-4 plan, to meet the problem of population expansion in cities after World War I. What seems to have happened with the junior high school organization is that a unique program for in-betweener's was overshadowed by a program for adolescents. The junior came to look too much like the senior high departmentalization, and an activity program and a social program for adolescents got established. The needs of the older children dominated the program and made it too mature and made it too mature and sophisticated a program for those who are still in between childhood and adolescence.

In looking at the elementary school I find as serious a problem as I do in the junior high school. The elementary school, as we know it, characteristically has placed a great emphasis on the role of the individual teacher as the guide, the counselor, and the teacher on a self-contained classroom basis for all of the children in his or her room. This type of organization is excellent, so it seems, for early childhood and childhood up to age 10 or 11. But when you look at this organization in the face of increasing specialization of knowledge, with the increasing need for teachers to be thoroughly abreast of the special fields in which they teach, and when you look at it in terms of these earlier maturing youngsters who do need more challange in their school studies, it is doubtful whether the self-contained organization can really endure. Is it possible, is it feasible, is it even desirable, for a 5th or 6th grade teacher to deal adequately with all of the subjects of the curriculum? Now of course, one answer is to departmentalize the elementary school. But this brings into the elementary school the same faults of the junior high school organization, and I do not for one moment propose departmentalization as the way to organize and instruct a middle school.

When we examine the 6-3-3 plan further, we also have to recognize that the 9th grade has never been firmly established as a junior high school year. Even though it has been housed in the junior high school, it has been accounted for as a senior high school grade. Schools have been bound by state education department and accreditation association regulations, even by the statistical systems of the United States Office of Education, to identify the 9th grade as a high school grade. Frequently out of joint with the 7th and 8th grades, or causing the 7th and 8th grades to be put on the same Carnegie unit system, the 9th grade has frequently been a misfit in junior high.

Now recognizing that most 9th graders are fully adolescent, is it not desirable to firmly fix the 9th grade back in the high school where it has tended to be anyway and to have a well-rounded 4-year high school unit?

Now I want to talk about some of the things we have provided in the junior high schools that should be retained in the middle school. Before I do this, let me emphasize that in this age of educational innovation and experimentation, the middle school organization seems to offer an excellent opportunity for research on an educational program designed to increase rather than stifle intellectual curiosity and endeavor. It was this I think that led Paul Woodring last fall, in the Saturday Review, to comment most favorably on the intermediate school. In fact I thought he went a little far out when he said the 6-3-3 plan was definitely passing out of existence--after all, there are still some 6,500 junior high schools in the United States. But his reason for emphasizing the possibilities of what he called the "intermediate school," or the middle school, was that it offered abundant opportunities for new staffing patterns including the use of team teaching, for the use of programed learning, independent study, and new course content, and, as a necessity, the development of a new kind of teacher education at this level.

I think we may work, as we look into the opportunities for the junior high school, to be certain that we do more than simply try to get on the bandwagon because of discontent with what we have. Now let me try to be more positive and suggest some guidelines for building a model middle school program--one that would retain the advantages, hopefully, of the elementary school, and of the junior high school, but that basically will be a school for the age group we are talking about.

My first guideline is that this middle school should be designed to serve the needs of older children, pre-adolescents and early adolescents. It should be planned as a bridge school, a definite bridge from the school for childhood to the school for adolescents, not as a vestibule to the senior high school which the junior high school tends to be. Let's create a separate school able to stand on its own with definite plans and programs so as to bridge well the elementary and the high school, providing for continuity of education. We know that children in this age bracket, in the 10 or 11 to 14 year old group, need freedom of movement, opportunities for initiative, a voice in the running of their own affairs, the intellectual stimulation of working with different groups and with different teacher specialists.

I would suggest as another guideline, that this middle school organization, should make a reality of the long-held ideal of individualized instruction; that here we would definitely try to develop a learner interested in learning on his own by giving him or her a maximum of the services which would insure a liking for learning. I would have every pupil in the middle school assigned to a teacher counselor who knows him well and will work with him if at all possible and feasible throughout his years in the middle school. I would have an adequate program of diagnostic services which permits teachers to plan individual deviations from standard programs. There would be special instructional units where pupils may schedule work so that they can catch up on needed skills and so that they can branch out into further experimentation.

It is in this middle school too, that, I would place primary emphasis on the skills of continued learning. I refer to such plain, commonplace, but very important skills as reading, as reasoning, as asking questions, as writing, as problem-solving, as the use of the library, as the use of the reference tools and the intelligent use of all of the media which we have available for students' use. Teachers in these grade levels must be past masters of the guidance of pupils and the use of everything that is in a well-handled library. They must be past masters in teaching youngsters to ask questions, to formulate questions well, to get information from whatever sources are available and to test out their ideas, their hunches, their conclusions. Then too, there would be a beginning of independent study, as children are ready, and I expect that they are ready earlier than we generally start them. There would be opportunities for children on a flexible basis, free of group activity, free of class instruction, to work as individuals on many types of independent study.

Particularly it is in the middle school that there is needed a rich program of exploratory experiences. I think in sizing up the junior high school against its predecessor, the 8-grade elementary school, that obviously the greatest contribution made by the junior high school was the introduction of the various types of exploratory experiences. These may be less available now as a greater insistence is placed on a fuller program of academic type work.

In this middle school, there ought to be a special interest studies, competently supervised, competently operated on a flexible kind of basis. These services should provide individualized instruction in each curricular area, and also in such varied activities as reading, acting, ceramics, photography, personal grooming, and also all of the arts that we can possibly arrange for and afford to support. I would particularly emphasize, in the middle school, a program of health and physical education. This is desired especially for boys and girls of the middle school years, to include direct instruction in personal hygiene combined with regular participation in fitness activities, special group games, carry-over sports activities, with adequate facilities and specialized supervision for a wide range of individuals, including those needing correctional and remedial programs.

I think that most of all in these middle schools, we would do what we find always difficult, and that is to place a very deep and distinct emphasis on values. The middle school serves years which precede the full onslaught of the temptations of adolescence. These years comprise a uniquely advantageous time for helping children to formulate values of their own; to organize and question their practices in school, their behaviors, the social attitudes they encounter, the group behavior which they see. This is the opportunity for the teacher-counselor who is working very closely with a group of youngsters throughout their days in school. The object would be to get to know them so well, so personally, so intimately, that there may be steady dialogue among individual pupils and with their teacher for the basis of the judgments that the pupils reach.

Now as to the organization and the program of this middle school related to these guidelines noted: I would like to see a program set up on a three-phase basis, and this is just a grouping for convenience. First of all, I would like to emphasize the phase of basic skills and the continuation of instruction in the learning process itself. This phase might be largely on an individualized basis using some programed instruction, with competent personnel in charge of reading skills and other centers.

Secondly, as an important phase of this program, the general studies area comprising primarily the basic academic subjects as we know them of the social studies, mathematics, language arts, and science. Here there would be a very carefully developed sequential program of studies tied into the elementary school at one end and the high school at the other with full opportunity for children to move backward and forward in this program.

Thirdly, there would certainly be the personal development aspect of the program, which would include the special programs of remedial work, independent study, and various exploratory experiences.

Each pupil would be scheduled into all three phases each year, Hopefully the arrangements would add up to a nongraded organization in which each pupil would be free to move in terms of his own ability. He would not be expected to progress at the same rate nor to the same depth as any other pupil. He would not be expected to be at the same grade level in all of his studies. His program and his progress would be cooperatively planned with his homeroom teacher. I think the instructional unit of this school would be the individual. The focus would be on a program of educational diagnosis and curriculum and instruction for the individual as he comes in his later childhood from an elementary school, and as he is maturing to become the increasingly independent learner who should move into the high school.

May I mention some possible organizational highlights? Could each middle school pupil be in a homeroom of 25 pupils who are in the same year in school, but who are otherwise a heterogeneous group? I think of the homeroom teacher with his or her group of some 25 youngsters as a person who has a speciality in some one of the basic curriculum fields, but who also has sufficient insight into the pre-adolescent that he or she can serve as the group counselor for this homeroom. I would see this group continuing with that teacher throughout the three or four years of the middle school, so far as it is possible, feasible and desirable. I would see the "class" in the middle school as a group of four homerooms of about 100 pupils. Each of these four homeroom teachers would represent some specialty, one in mathematics, one in science, one in language arts, and one in social studies. These four teachers would operate as a team, a team constantly responsible for planning the basic program possible for that class of 100 students. There would be many different plans of teaching in this organization. I suspect that as children enter the middle school, for the first few weeks, maybe a good part of the first year, it would be largely a self-contained teaching plan, at least for these four basic areas. But as teachers plan together, they would begin to provide for some specialization of teaching. Thus the mathematics specialist might do more of the mathematics and there might be regrouping for this. There could be some very small group instruction and some large group instruction, too, with scheduling arranged so that each teacher shared in the work of the total class. As I see it, in a good middle school, you cannot possibly set up a schedule for a year, a semester, or even a month in advance, but the team of teachers working with their 100 or so pupils would have to make, from week to week, and sometimes from day to day, the best kind of plan possible for this group.

Basic studies or the common learning programs might comprise about two-thirds of the school day, the other one-third to be spent in special centers with specialists in charge of reading laboratories, foreign language laboratories, arts and crafts, and other laboratories.

The vertical unit, assuming you have a school of 800 or larger, could be a school within a school. There might be a unit comprising four classes of 100 each, about 400 pupils, with 16 teachers in the basic areas, plus the special teachers needed. This would give the children in the little school a wider community in which to get acquainted, in which to develop new social understandings, in which to attain leadership, but not one so large as to become depersonalized.

I have already mentioned that in this organization we need especially organized centers, centers that would serve the exploratory interests and the remedial and development aspects of the school program. Pupils would not be pinned here in classes. They would be assigned to work in these centers sometimes for a short term of instruction, sometimes for a longer term.

Now let me sum up. My chief point has been that we do need for these children who are moving from childhood to adolescence, the very best educational program that can be provided. It is here that we can build true learners or we can encourage youngsters to get out of school just as quickly as possible. It is here that we can get progression or regression in learning. It is here that we can help to develop the future successful and happy individual, or we can help to create the delinquent segment of our society.

In planning the middle school program, I have suggested three features of the elementary and junior high school of today that we must retain. One is the closeness of every pupil to some one teacher, which is characteristic of the elementary school with its self-contained organization. I have substituted for that in the middle school, the idea of the homeroom teacher who would work with a group of children for a portion of each day, at least for one year. I have also suggested that we ought to hold to the gains made in the junior high school with the exploratory specializations we have provided there. Let's increase them, let's make them available earlier, to build the interests and stimulate the intellectual activity of the 5th and 6th graders. Thirdly, I suggested that we need to hold onto and improve our emphasis on the learning skills which has characterized the elementary school regrettably more than it has the junior high school.

It hardly needs to be added that moving one or two grades up from the elementary school and the present program of those grades will notcreate a middle school. We cannot assume that simply taking the self-contained 6th grade out of the elementary school and putting it into a new middle school, and holding onto the 7th and 8th grades on a departmentalized basis of the junior high school will create a real middle school organization. This would just place two schools under one roof. Instead this ought to be the opportunity to plan for a fundamentally different kind of organization utilizing team teaching and some aspects of a non-graded structure to provide a much richer experience for all the children.

In conclusion, I would emphasize that whatever program is experimented with ought to be truly experimental. It ought to be set up on a basis so that the question can be answered in a few years, "Was this program really better than the one we had before?"

I doubt if a school district should consider going into a middle school program without allowing at least one full year of careful planning and studying for program development and experimental design. In any event, whatever new program is introduced should be as carefully through out, and as hopefully and as enthusiastically conducted as possible.

INTRODUCTION TO THE SPEAKER

DR. PAUL J. ZDANOWICZ

The five to eight Intermediate School Organization would seem to be a logical alternative to the seven to nine junior high school. Its emphasis upon aspects other than physiological might indicate an educational path differing from the basic purpose of educating to the uniqueness of early adolescence. This path emphasizing the development of learning skills and other cogitive objectives will permit educators to select, if they so desire, from more than one basic rationale for the schools in the middle.

Again it would seem appropriate to investigate the practice in the field to discover what pragmatic aspects of the five to eight Intermediate School seem to have the most important implications for educators interested in this area of education. One of the more theoretically knowledgeable Intermediate School Administrators in the country is Dr. Paul J. Zdanowicz at one time a principal of the Meredith G. Williams Middle School in Bridgewater, Massachusetts. Dr. Zdanowicz, in addition to his speeches and writings, conducted a study about the development of middle schools in New England for his doctoral effort. Few men can combine knowledge concerning the theoretical and pragmatic aspects of the Intermediate School so effectively as Dr. Zdanowicz.

ADMINISTRATORS REPORT ON THE FIVE THROUGH EIGHT MIDDLE SCHOOLS

BACKGROUND OF THE WILLIAMS MIDDLE SCHOOL

During the school year preceeding the inauguration of our program, the Brown-Bridgewater Project was in existence to assist in reorganizing Bridgewater Schools. This project involved a series of meetings extending over a period of more than a year, involving the entire local professional staff and a team of professors from Brown University under the leadership of Elmer R. Smith. A portion of Brown University's expenses was underwritten by the Ford Foundation. One result of the project was a report which included recommendations on various phases of the educational enterprises in Bridgewater, including a section on the middle school. A close relationship with Brown University on an informal basis has been in effect ever since.

Another example of cooperation between our school district and higher education is the critic-teaching program which was established in the middle school. The critic-teaching program provides that up to three junior teacher trainees are assigned each quarter to personnel selected as critic-teachers. The talents and services of these trainees provide many opportunities for individual and small group work. In this way, our faster and slower boys and girls are challenged to an extent heretofore impossible. Publicity given to the Brown-Bridgewater Project, the critic-teaching program with Bridgewater State College, the first successful Russian Sputnik, the National Defense Education Act which followed it, and the fact that our organization was new and we were thus far unfettered by tradition helped to create the climate for changing our program.

RATIONALE FOR THE MIDDLE SCHOOL

There are many bases for a grade arrangement of 5-8 in one building.

1. Some specialists in child growth and development have stated that 11 year olds belong with 12's and 13's rather than 10's in terms of developmental levels.

2. Bruner has suggested that children are able to understand more sophisticated concepts earlier--if properly taught, at their level on understanding.

3. Outstanding reading specialists note that grades five through eight are the Golden Ages for Reading; a) we know that reading skills receive great emphasis in grades one to four, and b) children in the middle years are not yet overwhelmingly interested in SAC (not the strategic Air Command, but sex, athletics, and cars.)

4. Studies on creativity indicate that the spirit of inquiry and creativity are dampened about grade five. This is the age when adults-- parents as well as teachers-- stifle questioning by saying " You ask too many questions," "look it up," "don't bother me now." No doubt, this occurs because children ask questions we are not equipped, either intellectually or emotionally, to handle.

5. The junior high school has never been universally accepted. In fact, it has been the object of much criticism that it has not really achieved its goals. One of the criticisms is that its teachers and principals are marking time while waiting for an opening at the high school- worse still, some of them have been "demoted" from the high school.

6. It is possible that many criticism results from the name itself. Any school organization must be justified on its contribution to a specific age level or levels. Since junior implies a senior, and since senior connotes superiority, small wonder that some junior high schools have copied senior high school practices and procedures. In many cases the principles and practices borrowed do not help--often hinder--the realization of providing the best possible program for early adolescents.

7. Children of 1966 mature earlier and are more sophisticated than their chronological counterparts of 1909--when the junior high school movement began. A possible reason for this phenomenon is the increase in effectiveness of communication, especially television and cars that have increased mobility of families. Better nutrition, better and more readily accessible medical care and attention have also contributed. This natural increase in sophistication is heightened by the schools themselves, with an increase

in the number of public kndergartens and private nursery schools. In many districts, higher entrance ages for grade one are reflected, naturally enough, in older fifth graders.

8. A leaflet distributed by the Michigan Association of School Boards describe middle graders as

> "not mature enough for high school,
> interests too varied for elementary
> school
>
> "too young for dances,
> not interested in children's
> games
>
> "old enough to explore,
> to young to drive
>
> "needing counseling and guidance,
> unwilling to accept the help of
> adults."

This same organization has noted that there are over 300 physical, social, emotional, and mental characteristics that have been identified in children from one to twelve. More than 100 of them are held in common by children in grades 5 thru 8.

9. Others have suggested that the pressures of early adolescence can be minimized in the middle school--with its lack of pressure from college boards exams and Carnegie Units that in the standard 7-9 junior high school **are felt** by ninth graders and transmitted, although inadvertently, to 7th and 8th graders.

10. Improved organization, staffing, methods and materials at 1-4 bring to grade five students that are ready for programs that differ from the traditional self-contained classroom type of organization.

11. Desire of parents for college prep specialization in grades 9-12 points to a need for general education in the middle grades--the last chance for art, music, etc. for some children.

THE MIDDLE SCHOOL-- A PROPOSED DEFINITION

The middle school is a broad education program designed for bys and girls in their early adolescent years. It spans the age range of the traditional elementary and/or secondary school, usually includes grades five or six through eight, and provides the enriched program in each grade. The goal of the middle school is to provide a general education in a flexible format emphasizing basic skills and giving due consideration to children of all levels of ability and all areas of growth (academic, social, emotional, physical and moral).

The program is stressed and is, no doubt, more important than grade organization. The definition also emphasizes age range rather than grades since the middle school of the future will, no doubt, be an upgraded institution. Since grade 9, which usually brings with it specialization, is not included the goal of general education seems appropriate.

THE PHILOSOPHY AND FUNCTIONS OF THE WILLIAMS MIDDLE SCHOOL

A faculty committee devised a philosphoy statement which was tentatively accepted by the entire professional staff. In summary, we strive for the optimum development of each individual pupil in all areas of growth. We attempt to achieve this goal by usually putting into practice procedures and techniques suggested by modern thinking in education. Too many schools have adopted this same ambitious goal but continue to operate in a manner which indicates that their actual goal is much more narrow than the one they profess to seek.

The middle school touches on a controversy in education between the supporters of the self-contained classroom of the elementary school and the supporters of complete departmentalization and the use of specialized teachers. According to the departmentalists, earlier elimination of the one-room,single-teacher concept would promote increased rigor in education and more individualized instruction. Those who favor the self-contained classroom hold that young pupils need primarily to maintain a sense of security with a single teacher.

In one sense, the middle school idea is to compromise. It maintains the single-teacher concept through the fourth grade. By this time, the basic subjects are thought to be well in hand for most pupils. Then, in an open, less restricted atmosphere, the pupil is gradually separated from his homelike elementary classroom at a time when facts and content can be better provided by specialists.

As mentioned earlier, schools are confronted with a much more sophisticated pupil in the middle grades than there was a generation ago. A comparison of standardized tests results of then and now indicates quite clearly that the pupil of the present is not only ahead of his parents in his mastery of the basic skills but also in the breadth and depth of his general knowledge.

The present day curriculum of the high school with its emphasis on quality education (accelerated, honors, and advanced standing groups) makes more of a demand than ever before that the middle grades send to the high school the best prepared pupils possible.

The middle grades, therefore, today present both a challenge and an opportunity. Affected as they are by unusual pressures from both above and below, it is believed that this challenge can best be met by increasing the flexibility of the curriculum in grades 5-8 while at the same time enriching the instruction that is offered to both groups of pupils and individuals.

The Williams Middle School represents an effort to provide flexibility. Its aim is to make further progress in serving individual differences with quality education in a flexible format.

ARTICULATION

As is true of all intermediate schools, articulation is one of the prime functions of our middle school. We consider articulation to mean relating what we do to what has happened already in our primary schools and to what will take place in the regional high school. Classrooms of our primary schools are virtually completely self-contained. The regional high school serving our children is departmentalized and the pupils are grouped by subject. To help achieve articuation, we have taken the following steps. In grades five and six, pupils are assigned to one teacher for at least one-half of our school day.

In grades seven and eight, we are departmentalized. Since we assign pupils to homerooms supervised by teachers whom they have in academic subjects, we reduce the number of adjustments to be made by the boys and girls. Many students have the same teacher for a given subject or subjects in grades 7 and 8.

OUR PHILOSOPHY

As educators at the Meredith G. Williams Middle School we believe it is the purpose of our school to provide a program whose major goal is the harmonious development of the physical, social, intellectual, aesthetic, and moral growth of each child in order to prepare him for more effective participation in our democratic way of life in a rapidly changing world.

We believe that our program should provide experiences for each child at his own level. Just as we strive to encourage the slow and improve the average, the bright should be challeneged.

The middle school, an emerging school for "tweeners" or early adolescents, regardless of which of the three or more directions in which it is progressing, is based on providing better for individualization of pupils programs. To achieve this ambitious goal of school-wide individualzation of learning experiences, I feel that teachers and other professional staff members must be considered as educational diagnosticians. They employ their assessments of a pupil's needs om terms of the child's ability or achievement (or lack of either or both), and, what has too long been neglected, not in educational theory, but in practice in the classroom or laboratories--individualizing or prescribing accordingly.

We in education are often critcized, among other things, for testing, testing and more testing without sufficient or proper follow-through--and this criticism has some validity. Although we still have a long way to go, we know more and more about children each year. But, we have not made enough significant changes as a result of our knowledge.

Once an assessment of a child has been made, prescriptions must be devised and followed for each child to

1. build up his strengths,
2. to correct weaknesses, either actual or relative, and
3. to capitalize upon his or her interests and drives in a particular direction or area.

PROGRAMS FOR GRADES FIVE AND SIX

We rejected departmentalization but recognized that 5th and 6th grade teachers are not superhuman. Our program for fifth and sixth graders is triplicate. Subject such as art, music, French, physical education, home economics, and industrial arts are taught by specialists to heterogeneous groups. The skill subjects, reading and arithmetic, are taught to groups that are homogeneous in regard to proved achievement. Although the work is ungraded, the children are kept with their age mates. This arrangement is possible since we have one hundred fifty to two hundred pupils in each grade. The third part of the fifth and sixth grade programs are a core made up of all other subjects and is taught by one teacher to a heterogenous group. A full-time science specialist is provided to coordinate the work of the teachers in the lower school, articulate science offerings with the upper school, conduct in service programs, present large group lecture demonstrations, etc. Put simply, we help our fifth and sixth grade teachers whenever they need assistance. We stress cooperative teaching on a grade level basis with some large group instruction.

PROGRAM FOR GRADES SEVEN AND EIGHT

The progran for seventh and eighth graders is departmentalized. In adademic subjects, homogeneous grouping is accomplished, in general, by utilizing at least four criteria; intelligence quotients, results on standardized achievement tests, previous marks and teacher judgement. (In non-academic subjects, all children are scheduled in groups that are heterogeneous by homeroom). Some refinements include scheduling students with above average ability in mathematics for one of the modern math programs(this is being expanded to include more children each year) and assigning those who have records indicating high achievement in English to French and a writing laboratory. A language laboratory is used with A-LM French program and above average students are scheduled for two double periods of English per week. These double periods are used as laboratory periods for teaching composition and permit the pupils to write under the direction and close supervision of teachers, with reference materials already available. Below average students are assigned to reading rather than French with these groups kept at about 15 students.

Flexibility and some elements of ungrading and team teaching are facilitated by the use of parallel scheduling or back-to-back scheduling. In this sytem, two or more teachers teach the same subject during the same period at the same time. Regrouping of students according to ability or interest and large group instruction are made possible with a minimum amount of interference with the total program, in this primitive form of cooperative teaching. Also, this type of scheduling usually insures that teachers concerned with a large group of children have mutual conferences periods--another contribution to cooperative teaching through cooperative planning. Then too, the availability of up to forty-five student teachers from Bridgewater State College makes possible a tremendous amount of individual and samll-group work; tutorial work and seminar-type discussions are utilized frequently. In academic areas we have cooperative teaching on a subject matter basis.

Our co-curricular program includes a junior band, a concert band, a dance band, instrumental ensembles, several choruses or glee clubs, a junior Red Cross Club, a library club, a chess club, press club, science clubs and intramural athletics, as well as student government organization. The intramural program is perhaps our outstanding co-curricular activity. Paid supervisors are assigned, and the activities are open to all pupils, boys and girls alike, from grades from five through eight. Most of the intramural activities take place after school on a strictly volunteer basis, and a wide variety of activities is included in the program. More than three quarters of the students take part, more than half of them regularly.

ADVANTAGES AND LIMITATIONS OF THE MIDDLE SCHOOL

The advantages listed below hold true for Bridgewater; the limitations should not be considered insurmountable. It is obvious that most advantages are to the fifth and sixth graders who, for the first time, are scheduled for enriched experiences with specialized personnel and facilities.

Advantages

1. Special facilities such as a home economics suite, shop areas, and a fully equipped gymnasium are available for the first time to our fifth and sixth graders.

2. Special programs such as guidance, health, speech therapy, and remedial reading and the services of helping teachers are also available for all children more economically for fifth and sixth graders than could be done in our three neighborhood schools.

3. A four-year span gives us ample opportunity to get to know and understand our youngsters.

4. The limitation of the Carnegie Unit is not a factor in our program, and electives are not as much of a problem as they may be in a school serving pupils in grade nine.

5. The newness of the organization has encouraged creativity in developing new techniques in both administration and teaching.

6. More adequate and modern equipment is available than could be provided economically in our neighborhood schools.

7. Subject-matter specialists are available to work with the fifth and sixth graders. Two purposes are served by this arrangement.. First, the greater depth of subject matter training of the specialists permits them to challenge the more able fifth and sixth grade children. Second, by utilizing the services of the seventh and eighth grade teachers, we have been able to reduce the size of fifth and sixth-grade classes for some subjects.

8. Teacher morale is excellent because teachers are not standing pat and because innovations are put into operation gradually-- and only after careful planning and in-

service meetings and with the support of the staff.

Limitations:

1. Since we have committed ourselves at least tentatively to ungrading content, more time is now required by teachers to devise new techniques and to evaluate and select new materials to help our plan achieve maximum effectivness.

2. The administrative difficulty of scheduling is complicated further, in this case, by our attempting to develop a smoothly operating enterprise around not only a transportation service and a lunch service but also around educational television programming over which we have very little control.

3. Reporting pupil progress, typically a thorny problem, has become more complex by our having made adjustments in the direction of teaching each child at his level. (It is hoped that our newly instituted parent-teacher conferences will help solve this problem. These conferences will take place twice a year with released time for the teacher.)

4. Originally, the exuberance of our teachers for new programs such as the School Mathematics Study Group and the A-LM French program may have placed unduly heavy demands on our early adolescents, but time has taken care of this for us. Also, originally we felt that fifth graders may be too unsophisticated and immature in some aspects to receive instructions in the same school as eighth graders. Our experience has, however, not proved this to be so. The author's personal opinion is that our pupils may comprise a more homogeneous group than is found in the more standard seventh, eighth, and ninth grade junior high schools. Also, we should recall that our modern mode of living with its improved medical and nutritional regime, increased family travel, and improved television programming has done much to mature and sophisticate our current fifth grade children.

5. In a dynamic school, extended time and effort are required to help keep teachers informed on how new ideas in education affect existing procedures and programs.It has been a real battle to interest some in cooperative teaching or using overheard projectors, or programmed lessons, but progress has been made.

6. Although our school plant is excellent, it was not specifically designed for a modern flexible middle school program. Our cafeteria and auditorium are the only areas large enough for large group instruction, and we have to improvise to find suitable areas for small group and individual work.

GENERAL COMMENTS

The newness of our organization and program and the reasonably extensive planning that was provided for permitted us to abolish or put into practice certain features as recommended by authorities and thoughtful practicing educators.

1. We moved away from the single textbook approach in the direction of more and better use of audio-visual aids including educational television, programmed units, extensive use of field trips,etc.

2. We had no graduations, class days, promotion exercises, honor rolls, honor societies, sophisticated social programs, etc.

3. We had no interscholastic athletic program.

4. We did have an average program of intramural athletics with paid sponsers, a variety of activities, aimed at carry-over values, with voluntary participation and a late bus.

5. Emphasis on the complete development of each child was fostered by deemphasizing traditional letter grades through the implementation of regularly scheduled parent-teacher conferences on released time for teachers. Ninety percent participation was achieved, with 1 1/2 conferences per the child average. In the fall and spring these conferences replaced the report card.

6. Many club-like activities grew out of regular classroom work.

7. Guidance and/or whole child point of view is stressed with extensive exposure of one pupil to one teacher.

8. Instructional materials were geared for ability and achievement levels rather than age or grade level alone.

9. Joy of and fun in learning were emphasized through emphasis on the practical or relevant in curriculum.

10. We placed emphasis on service-adjustment counselor, speech therapy, special classes, dental hygienist, affiliation with a mental health clinic.

11. Emphasis on aural-oral approach in modern foreign language was begun at an early age.

EVALUATION

The report of the Brown-Bridgewater Project suggests that the staff of the middle school evaluate the re-organized program in terms of the extent to which the following criteria are being met:

1. individualization of pupil programs
2. differentation of instruction
3. self directed or independent study
4. flexible grouping
5. academic progress
6. flexibility of arrangements for learning (space)
7. flexibility of arrangements for learning (curriculum)
8. use of wide variety of teaching resources, including those untapped in the community
9. guidance and testing to support individualzation
10. emphasis on the use of teacher specialties
11. increased use of technological aids to instruction
12. emphasis on the library as an instructional center
13 specialized instruction at an earlier grade level
14. articulation with the elementary schools and with the regional high school

These criteria are, it must be pointed out, not unique in their application to the middle school. They are generally accepted guides to evaluating any school offering a modern type of educational program. We feel that some progress has been made in each of the above-named areas.

INTRODUCTION TO THE SPEAKER

DR. NELSON BOSSING

While considerable discussion has taken place throughout the country concerning varying alternative approaches to Middle Schools, education colloguy has in general run subordinate to the more basic issue of the philosophy of early adolescent education. In line with this philosophy what are the basic functions of a junior high school? What should junior high schools be doing in order to best serve the needs of the early adolscent? Are there common purposes which might be appropriate for both Middle Schools and the junior high schools?

In our perusal of the underlying purposes of early adolescent education we can probably find no more capable person for assistance than Dr. Nelson Bossing of Southern Illinois University. Dr. Bossing has been active in early adolescent education for decades, and has been instrumental in the development of core curriculum theory. His book, Developing the Core Curriculum co-authored with Faunce, is considered one of the masterful works in this field of pedagogy.

EDUCATION FOR THE EARLY ADOLESCENT

NELSON L. BOSSING

For a long time the junior high school appeared to little more than mark time. Then suddenly it began to expand rapidly. From 1896 to 1900 Aubrey Douglass suggested that four, and Briggs that two junior high schools had been established, and not over twenty in 1910. Most authorities, even Briggs at one point, agree that not over three hundred junior high schools were in existence by 1920. Calvin O. Davis, Secretary of the North Central Association at that time, holds that it was doubtful if sixty per cent of these schools could legitimately be called junior high schools. Band wagon pressures always have led some administrators to join what they think is a popular movement whether they know what they are doing or not. By 1930 there were nearly two thousand such institutions, by 1959, the last official U.S. Office of Education data, there were five thousand junior high schools, and by 1966 many more, although authentic figures seem not available.

Figuratively speaking, counting noses is not the best index of the growing importance of this organization. Until recently the junior high school has been like the poor relation or the younger child in the family, all too often it has donned the cast off clothes of the elementary or senior high school as these schools have moved into modern palatial educational centers. In recent years the junior high has been judged to be of such educational importance as to merit new buildings especially designed to facilitate radically new educational programs.

Perhaps a good measure of the growing interest in the junior high school is the increase in the number of books produced on this segment of our common schools. During the time the junior high school was beginning to gather initial momentum for a period from about 1915 to 1924 six books were written, then for a dozen years there was no particular interest expressed through the appearance of new books. In 1937 one major text on the junior high school appeared, in the 1940's two books were published, in the 1950's we began to feel a resurgence of interest in the junior high school--five books were written, one a revision. Now halfway through the 1960's we have six major general books that have been written on the junior high school, with eight to ten complete bulletins of NASSP devoted to the junior high school. In addition two books have appeared on the special subject of guidance in the junior high school, the U.S. Office of Education, in 1963 presented an elaborate survey of the junior high school, and since 1960 several lesser publications devoted to the junior high school have appeared. Already by the midpoint of this decade more than twenty publications have appeared on the junior high school. Possibly an even more significant index of the importance of this sector of our educational system is the aroused interest in new curriculum designs for this age group and a corresponding demand for new teacher training and specific certification requirements for junior high school teachers and administrators.

CHANGING CHARACTER OF THE JUNIOR HIGH SCHOOL

To understand clearly why the education of early adolescence is such a vital problem to us tonight may we take a quick look at the changing educational character of the junior high school. Contrary to popular thought 1893 not 1910 represents the real historic beginning of the American junior high school. The Committee of Ten, 1893, represents the crystallized thinking and concrete recommendations from which has come the dominant concept of the junior high school for most of the first fifty years of its history, affecting a large sector of thinking about this school even today, and which led to the establishment of the junior high school in 1896.

That concept and institutional example was spelled out by the Committee of Ten, 1893, in the seventh-eighth grade institution separated from the elementary school and made a part of secondary education, having as its purpose the extension of high school education downward two years and thus streamlining the secondary school as a college preparatory institution enabling the colleges and universities to push back into this extended secondary period, subjects it had been required to take over in the historic struggle of the American high school to shake the domination of the status quo college and university and provide a vital functional curriculum for American youth. This struggle was dramatized in the early history of the

Academy of 1751 and the English Classical School in Boston, in 1821, which four years later was to become the English High School.

You will recall that the Committee of Ten under the leadership of the famous and dynamic Charles Eliot, president of Harvard University, recommended the separation of grades seven and eight from the elementary school and made a two year school, organized as a secondary school, imitating the high school in organization and purpose. It was to be organized on a separate subject basis, rigidly departmentalized, promotion was to be by subject, teacher subject specialization, utilization of high school teaching methods and standards, thus divorcing this new institution completely from the elementary school and streamlining it as an integral part of a six year college preparatory institution.

The first educational institution established in conformity with these specifications of the Committee of Ten is now generally credited to Richmond, Indiana, which in 1896, three years after the 1893 Committee of Ten report, established a two year school inclusive of the seventh and eighth grades, housed separately in a new building, and meeting the specifications as to the organization of this new school outlined by the Committee of Ten. In 1918, Calvin O. Davis, secretary of the North Central Association of Colleges and Secondary Schools, asserted that most junior high schools of that date were two year schools. Other junior high school authorities of the period including Thomas Briggs in The Junior High School, 1920, support the Davis conclusions that most junior high schools began as two year schools.

With the turn of the century new factors began to be emphasized leading to change in the junior high school. Nicholas Murray Butler, president of Columbia University, and John Dewey were two stalwart educational leaders who began to emphasize the importance of early adolescence in the junior high school period. In 1904 G. Stanley Hall's famous two volume study on Adolescence was published which gave objective support to Butler and Dewey. From that time forward to the present there has been a consistently growing emphasis upon early adolescence as the key identification of a junior high school.

Another consideration affecting the character of the junior high prior to 1930 came with the shocking discoveries in the first decade of this century of the terrific drop out rate in our schools. A.S. Draper, Commissioner of Education of the State of New York in 1904 estimated that only one-third to two-fifths of the pupils entering the first grade remained to complete the eighth grade. Edward L. Thorndike of Columbia University in 1907 in a monograph issued by the U.S. Bureau of Education entitled The Elimination of Pupils From School estimated that only a fifth of the white children stayed in school till the fifth grade and less than one in ten graduated from the high school. Leonard P. Ayres, as a result of an extended study of pupil's elimination in large cities substantially agreed with the findings of Thorndike. George D. Strayer studied the U.S. Census data collected in 1908 and reported retardation and elimination conditions similar to those of Thorndike and Ayres. This led to an extended period of "bread and butter" vocational emphasis in the junior high school as a holding power attraction. In the late 1930's I chanced to speak to the faculty of the oldest junior high school established in Minneapolis. Before the meeting with the faculty the principal piloted me about the building explaining the program. In the basement he pointed out the change that had taken place since the building had been erected. At first, he said, his entire basement floor was given over to vocational training. Gradually vocational education has been deemphasized until now only two rooms are used for that purpose. And he could have pointed out that even what vocational emphasis was left differed radically from what had been offered originally.

Since 1930 the emphasis of educational leaders has been away from the college preparatory function, mechanical organizational problems, and momentary vocational strategy to a concentration of attention upon early adolescence and its needs as the distinct concern of the junior high school. James Glass, eminent supporter of the junior high school in 1930, declared: "The philosophy of the junior high school movement will be sound in proportion as it is founded upon the psychology of early adolescence." [1] Proctor and Ricciardi of Stanford University, prominent disciples of the burgeoning movement of this period, insist that "The junior high school is an attempt to reach and serve the individual student in the early adolescent stage." [2] Charles H. Judd, a staunch supporter of the junior high school throughout its growing pains of the thirties and forties observed that "The junior high school period of life is a period of unique intellectual and social demands...Human nature calls for a junior high school which is different from a senior high school."3 In the major textbook on the junior high school produced in the thirties, Pringle adds his voice to the stress now uniformily placed on the centrality of early adolescence as the feature of the junior high school in these words:

> The junior high school is an organization of the seventh, eighth and ninth grades into an administrative unit for the purpose of providing instruction and training suitable to the varied and changing physical, mental, and social natures and needs of immature, maturing, and mature pupils. "Maturity" here means the arrival of adolescence.4

To climax the statements that portray the concept of early adolescence as the heart of the junior high school idea may I quote from two important organizations that have given recognized leadership to the junior high school movement. During the past ten years, the Southern Association of Colleges and Secondary Schools, which has exerted tremendous influence on the fortunes of the junior high school since 1958, has defined this institution thus:

> The junior high school evolved as an institution conceived to meet the unique physical, social, emotional, and intellectual needs of the late pre-adolescent and the early adolescent. The true junior high school is vastly more than a grouping of grades: it involves a program keyed to the growth and development of boys and girls in the late stages of childhood and early years of adolescence.5

The influentional National Association of Secondary School Principals through its Committee on Junior High School Education a year later also emphasized adolescence as the key concept of this educational institution in these words:

> Early adolescents differ markedly in characteristics from pre-adolescence and

> later adolescent youth. Therefore, our schools should be organized and administered with some regard to the age characteristics of pupils.

Then this Committee concluded its discussion of the merits of various organizational patterns for this group with this statement:

> "That the three-year junior high school, including grades 7, 8 and 9, is the best type of grade organization to provide an educational program for early adolescence."6

WHAT IS THE EDUCATIONAL PROBLEM OF ADOLESCENCE?

The evolving concept of the junior high school has left the college preparatory ideas of the Committee of Ten far behind, and the stop-gap holding power need for a vocational program, too, has been outgrown, as the attainment of the maximum holding power of the junior high school long since has removed its justification. On the other hand, there has been a steadily multiplied awareness over the past half century of the uniqueness of the physiological and psychological characteristics of this age period and the overshadowing importance of its educational needs that have come to make adolescence the prime consideration of the junior high school.

The problem of education of this age group is not as simple as might be inferred from the unanimity expressed by educational leaders of the basic importance of adolescence in any educational program devised for this group. Human nature has not accommodated the educator and administrator in their natural desire to set up a simple uniform educational plan to meet adolescent needs. Adolescence refuses to be uniform as to the time of its emergence or its fulfillment. Referring to the complex nature of the junior high school period, the psychologist, Wattenberg, has declared: "Its clientele is composed of so beweildering an assortment of young people at crucial turning points in their lives as to defy oderly description."7 Normally about seventy percent of the girls are in various stages of pubescence and thirty percent are pre-pubescent when they enter the seventh grade in September, while at the same time approxiamtely thirty of forty percent of the boys are pubescent and sixty to seventy percent are pre-pubescent when they enter the seventh grade.

Wattenberg tries to dramatize the confusing situation that confronts the educator of the junior high school period with a characterization of this more or less typical situation.

> If for the sake of having numbers easy to remember, we were to assume a typical class of forty, then in the sixth grade it would be composed of two fully adolescent girls, eight pre-adolescent girks, ten childish girls, four pre-adolescent boys, and sixteen childish boys. A ninth grade class of the same size would consist of sixteen young ladies (adolescents) and four pre-adolescent girls, plus two childish boys, eight pre-adolescent boys and ten fully adolescent boys.8

It is clear from the research evidence abundantly available on this age group that while adolescence is the all important characteristic of the junior high school period there is a wide variation in the maturation levels between youth in this school, and more particularly a disconcerting time lag between the normal maturation of boys and girls. Girls tend to mature as much as a year ahead of boys. This creates myraid problems physiological, emotional, social, and intellectual.

Educationally this irregularity of maturation within the school and classroom groups makes the educational problems extremely difficult. It is enough to recognize that the shift from childhood to adolescence represents a forbidding array of difficult problems uniquely peculiar to this stage in the developmental growth of boys and girls, but to complicate all this with a wide range in the time of adolescent maturity is almost enough to cause the conscientious teacher to shy away from a classroom and school of such divergent personalities and varied educational problems.

Incidentally, this summer I have been in charge of an educational project at Southern Illinois University, involving fifth, sixth, and seventh grade classes. At times while this address was being prepared, I have sat in the classes observing the short and gangling boys as well as small frail and large well-developed girls, trying to estimate the stage of pre or adolescent development of each, and trying to surmise just what was going on in their minds.

At the beginning of the project the Mooney Problem Check List was given to the pupils of each grade. It has been a fascinating experience to note the differences and similarities of thinking and concerns between the grades and within a given grade. I think I can appreciate as never before the complex problems of the teacher of preadolescent and adolescent pupils if he or she is to contribute in the classroom in any fundamental way to the educational needs of boys and girls. The educational thinking of such teachers will have to diverge markedly from the arid thinking of the typical subject centered secondary school teacher if he or she expects to be a vital helpful teacher of adolescents.

EDUCATION OF EARLY ADOLESCENTS

Within recent years several efforts have been made to discover the real needs of this age group and to suggest broadly what the direction of education should be for them. Tonight I would like to present two of these well-known proposals as an introduction to my own suggestions.

One of the most widely known and productive leaders in this field is Robert J. Havighurst who has given us his well known ten developmental tasks of adolescence as follows:

1. Achieving new and more mature relations with age mates of both sexes.
2. Achieving a masculine or feminine social role.
3. Accepting one's physique and using the body effectively.
4. Achieving emotional independence of parents and other adults.
5. Achieving assurance of economic independence.
6. Selecting and preparing for an occupation.
7. Preparing for marriage and family life.

8. Developing intellectual skills and concepts necessary for civic competence.
9. Desiring and achieving socially desirable behavior.
10. Acquiring a set of values and ethical systems as a guide to behavior.[9]

While it may be said quite correctly that none of these tasks ever are achieved completely during the total span of life, it is also true that seven of them become of primary importance in early adolescence, because it is at this age level that these achievements become of primary concern to the young adolescent beginning to achieve basic orientation to his consciously expanding world. Task 5, Achieving assurance of economic independence, 6, Selecting and preparing for an occupation, and 7, Preparing for marriage and family, are remote tasks primarily those of later adolescence, and most pressing in the early years of adulthood. Motivation for the achievement of these tasks come in later adolescence and early adulthood. The extent to which major progress in achieving effectiveness in these three objectives has been attained by early adulthood will determine for most human beings the degree of success they have as mature adults, assuming that they succeeded in early adolescence in achieving success with the seven tasks essentially their immediate concern.

Another well known list of ten similar tasks has been projected for which a chart offsets the task with five stages of development considered pertinent for each age group from infancy to later adolescence. They are given below with the stages of development indicated as appropriate for early adolescence.

Task	Development Stage During Early Adolescence
1. Achieving an appropriate dependence-interdependence pattern.	1. Establishing one's independence from adults in all areas of behavior.
2. Achieving an appropriate giving-receiving pattern of affection.	2. Accepting oneself as a person, really worthy of love.
3. Relating to changing social groups.	3. Behaving according to a shifting peer code.

4. Developing a conscience.	4. (Degree of achievement not determined)*
5. Learning one's psych-socio-biological sex role.	5. Strongly identifying with one's own sex mates.
6. Accepting and adjusting to a changing body.	6. Reorganizing one's thoughts and feelings about oneself in the face of significant bodily changes and their concomitants.
7. Managing a changing body and learning new motor patterns.	7. Controlling and using a new body.
8. Learning to understand and control the physical world.	8. (Degree of achievement not determined)*
9. Developing an appropriate symbol system and conceptual abilities.	9. Using language to express and to clarify more complex concepts.
10. Relating one's self to the cosmos.	10. (Degree of achievement not determined)*

SUGGESTED AREAS OF EDUCATIONAL CONCERN FOR EARLY ADOLESCENCE

The two well known lists of adolescent age educational tasks have been presented to indicate clearly the functional task of education as seen by responsible educators quite apart from the cliches of academicians as to what should clutter up our classrooms in the name of education: Educationally it is growing late for the schools, the junior high school particularly, to begin thinking realistically about what the real tasks of the schools are, and what should be some rationale between the acknowledged tasks of the age groups of the schools and the verbiage the school offers. In much of our so-called educational program given in the junior high school there is all too little what we offer that has much realism with the crying needs of early adolescence. In the language of the good book they ask us for bread and we give them a stone. The second reason for the offering of these two lists of adolescent tasks is to bolster the emphasis I give to the need of certain types of competencies I think it imperative to be stressed in the education of early adolescents.

May I now suggest some areas of primary educational concern for early adolescence.

---

*Explanation added by speaker

1. Helping youth develop effective levels of communication and quantitative competencies begun in the elementary school.

Before this group tonight there would seem little need to stress the basic importance of this responsibility on the part of the junior high school.

2. Helping youth understand the nature of his biological development and its significance for him.

The importance of the transition from childhood into adolescence has been stressed in this address as the raison d'etre of the junior high school. Then why not this fact be recognized in a basic way in the education of the emergent adolescent? Instead of a formal dry as dust factual course in biology in which the human anatomy is dissected in a highly impersonal factual way, we should begin to help boys and girls see what is happening to them as they emerge from the cocoon of childhood into adolescence. Certainly those physiological changes of the sex organs should be stressed that mark this boy or girl a maturing person whom nature has decreed should soon be capable of and biologically expected to assume his role as a responsible part of a family unit in harmony with the standards and expectations of the adult culture in which he lives. What these biological processes involve and why, as well as the normal forms these developmental manifestations take in the maturing youth should be clearly understood.

It is nothing short of tragic to note the pathetic bewilderment of boys and girls about their sex nature, its development, and how to deal with the personal problems sex creates for them, and with no sense of where to turn for advice and help. For the most part the school has let them down shamefully, as it has let their parents down before them, which is mainly the reason for the ignorance and concern of their children now. How can we expect adults to be intellegent concerning things which the schools neglected to teach them? Ignorance begets ignorance. The junior high school will be woefully derelict of its primary duty if it does not give assistance to youth to understand the biological aspects of its transition from childhood to adolescence.

This is not to infer that sex is all the biological help the junior high should contribute to youth albeit this is its major function. It is important that youth understand how and why the total bodily organism ticks. The elementary school should have contributed to these understandings and health achievements important to that age group. At this level additional health knowledge and good health practices should be assumed to be a part of the junior high school.

3. Helping youth make heterosexual adjustments.

Just as the junior high school carries a primary responsibility to help boys and girls establish a natural relationship between each other in the light of their growing awareness of their new and interdependent complementary roles as persons of different sexes--which children vaguely understand in a most elementary way. The junior high school has an obligation to provide a variety of opportunities for boys and girls to learn to work together, share interests and understand each other. It must assume a major co-educational role.

Part of this function is made extremely difficult by the lack of uniformity in the appearance of puberty among boys and girls, and the usual maturation of girls considerably ahead of boys, as pointed out earlier. A number of junior high schools have tried to provide a socialization function yet insure the participation of class members by the use of folk dancing, and similar group activities where partners of the opposite sex were automatically determined by the rules of the activity in selecting partners. In other junior high schools more special interest type classes such as home economics and industrial arts have brought boys and girls together as a means of providing socializing opportunities. For example, in a large junior high school boys and girls were placed together in a cooking class where they were paired to prepare food, set tables, and eat together, thus learning gracious table manners and social nuances. In a junior high school for which the speaker was responsible certain physical education classes of boys or girls were assigned to meet at the same hour, while the boys were studying health in the classroom the girls were using the gymnasium or vice versa. By arrangements of the teachers it was possible to have joint sessions of the two classes for mixed study, games, folk or social dancing.

I well recall visiting a seventh grade class where the teacher was trying to meet this function of the school through the use of social dancing. She had seated the girls along one side of the room and the boys along the other side. They were informed of the proper etiquette in securing partners for the dance. They were told that it was correct form for the boys to approach the girl he wished to dance with and ask her to dance with him. In a normal situation the girl was expected to accept the invitation of the boy who asked her. When the music started less than half of the boys crossed to the girls' side and sought partners. The other boys, assumedly pre-pubescent were not interested in social dancing. Finally, the teacher told the girls that if the boys would not ask them they were free to ask the boys. Unless the school is fully aware of problems particularly in the seventh grade that flow from the disparity in maturation time between boys and girls socialization efforts may create difficulties. Yet I am convinced that conscious co-education becomes a basic responsibility of the junior high school.

4. Helping youth understand their emergent role sociologically.

Beyond the immediate problem of heterosexual adjustment is the equally pressing one of helping boys and girls understand their emergent roles as a sociological entity. They must begin to perceive their relation to society as a whole and develop social competencies. Psychologically it is the beginning of the individual's attempt to develop a satisfactory self concept.

And first in that hierarchy of relationships is his relationship with his parents. It is at this time the boy and girl begin normally to chafe at the real or assumed restraints of parental control. Forever pertinent to this problem is the now classical statement of the famous humorist Mark Twain of his adolescent youth. Paraphrasing - "When I was twelve I could hardly endure my father, he was so ignorant. When I was fifteen I could tolerate him, but when I was eighteen I marvelled at how much the old man had learned in such a short time." It is a natural phase of growing up. To develop gradual competency in self control and self direction there must be a corresponding releasing of the controls that parents have exercised. It is a wise parent indeed who knows how and when to relax parental authority, it is a rare youth who can without friction adjust to the gradual parental release of authority and gradually achieve a high degree of self management. Yet, this is an achievement we recognize as of first importance if youth is to become a fully adjusted efficient social being.

Youth cannot be expected to develop these social understandings and behaviors by himself even with the help of the wisest of parents. Just as the school must provide youth with the opportunities to gain the understanding and knowhow to become effective in his larger social-civic relationships. Knowledge is power only when it can be and is translated into action. When I was an early adolescent in the eighth grade the teacher at the beginning of the year held up a state adopted textbook in civics and said to us: "Class, I am sure all of you want to graduate this spring. Now we can study this book as we have done other books. But I have kept a list of the questions asked in the state civics examinations for the past several years. If you cite article and clause of the Constitution of the United States and of the state of Kansas you can answer every question asked in these examinations in the past several years. The two constitutions are in the appendix of this book. I suggest that we forget the rest of the book and spend our time memorizing these two constitutions." Of course, we wanted to graduate that spring, so we spent the year memorizing the constitutions and citing section and clause appropriate to her collection of questions. That spring I made 98 in the state examination. I have never understood where I lost two points as I had those constitutions letter perfect. Incidentally, that is the kind of thing we have been short changing youth with in the name of education. No, the school must help youth to understand the meaning of social realtions and responsibilities by engaging him in social situation where he confronts social problems both personal and societal, and learns in the milieu of social living how to work with others, how to accept responsibilities, how to gather pertinent materials from library and community to solve vital problems of his own and his group. Through these activities he must learn to respect other opinions, control his emotions in the midst of disagreement on unresolved issues that must confront any group trying to live together and solve their mutual problems.

The junior high school must reorient its program from an emphasis upon compendiums of classified knowledge in history, civics, and other subjects vaguely hoped will provide the youth knowhow in social and citizenship behavior, and center its activity around action problems that will help boys and girls to understand human relationships realistically, and through intersocial problem situations learn how to live and work together. These problems of vital living must extend out beyond the home and school into vital responsibilities and services in the community. Through such a program divorced from the artificialities of much that passes for early adolescent education today youth will learn through experience the roles he must play in life of dependence-independence relationships, and come to feel a real sense of belonging so important to the person. As Art Combs in an address on "Involvement and Commitment" reported of his daughter away at college who became involved in civil rights projects, when he expressed some fatherly concern for her personal safety she replied: "Daddy, this is the first time I have felt that I was worth something. I feel that I belong to something worth living and dying for." To a lesser degree the school must substitute a meaningful challenging program of social involvement instead of our largely lifeless meaningless artificial curriculum that will lead youth to live and work together, develop a sense of worth and belonging and develop school and civic habits of service and responsibility. Too, it is in living evironmental situations that the meaning of loving and being loved as a person of worth and dignity is discovered.

5. Helping youth develop a value system.

Possibly no part of the education of our youth is more important than helping them develop a value system consistent, rational, and adequate to enable them to satisfy the basic demands of themselves and their culture yet flexible enough to make adjustment possible in a rapidly changing world. While this is a task of critical appraisal and adjustment throughout life it is most acute at the adolescent period, and particularly in early adolescence as the boy and girl begin to chafe at the parental apron strings and strike out sometimes blindly, often belligerently, at the home, school, and culture rules and regulations which they feel unreasonably fetters their freedom.

The reading of such research studies on adolescence as The Adolescent Experience, by Douvan and Adelson, or any good recent treatise on adolescence emphasizes the universal characteristic of adolescent rebellion against home and societal rules with its beginning in early adolescence. As I have been studying the reactions of fifth, sixth, and seventh graders to the Mooney Problem Checklist it is interesting to see the gathering questioning and dissatisfaction of boys and girls as they advance in age with so many aspects of home limitations upon their freedoms. I have said to my classes of prospective teachers that they might learn a great deal about the modern young adolescents they will meet in the classroom by reading such a syndicated column as that of Ann Landers.

What appears as an almost direct contradiction is the quite generally recognized fact that adolescence is one important period of ethical idealism. The church through the ages and even primitive tribal groups have recognized the early adolescent age as a most important time to challenge youth to a commitment to idealistic patterns of living. Yet this is a natural concomitant to seek a new satisfying set of life values to replace those he thinks he opposes.

6. Helping youth understand their changing world.

As Alfred North Whitehead so dramatically said in that stimulating little book Adventures of Ideas, referring to the centuries old expectation of little or no change in living from generation to generation:

> The whole of this tradition is warped by the vicious assumption that each generation will substantially live amid the conditions governing the lives of its fathers and will transmit those conditions to mold with equal force the lives of its children. We are living in the finest period of human history for which this assumption is false.

In 1962 the Office of Education predicted that all high school graduates in the future would have to change their occupations at least four times during a life time and completely retrain each time. In 1965 Carr in a book entitled Social Studies supported the notion of the rapidity of world change in these words: "No one really knows what the world of tomorrow will be like, nor with what problems Americans, as well as other people, will be faced." There seems little point before this group to further emphasize the recognized condition of rapid world change that exists today, and which all students of education agree will gather accelerated speed in the future with its intensification of the many and novel types of problems tomorrow's youth must face, and the changing educational responsibilities this places upon our schools, particularly the junior high school.

7. Help youth to develop problem solving-critical thinking skills.

A very obvious corollary of the uniqueness of this present and future world of rapidly changing conditions as these affect youth and education must sharply focus its attention upon the need for a de-emphasis on a factual memory type curriculum so characteristic of the centuries past and instead stress problem solving and critical-thinking skills so essential for tomorrow's needs. As this address was in preparation an article appeared in the June, 1966 issue of the Ohio School Boards Journal discussing the need for problem solving as a new form of technical education. References were made to two prominent authorities in support of problem solving critical-thinking types of learning. Walter E. Pittmann, manager of Metallurgical Research for Timken Roller Bearings Company was quoted as emphasizing the need for a strong basic general education program in which students have been prepared in problem solving. Also quoted was the Summer Study on Occupational, Vocational, and Technical Education at Massachusetts Institute of Technology in a report recently published which gave similar emphasis to problem solving education. The 60 participants of the Study offered a proposed program beginning at the junior high school...stressed in the program would be investigative learning instead of the teaching of manual skills. The article closes with a suggestion that if school programs "Were organized around units of work, problem-solving approaches, the use of the library, and the learning of methods of inquiry, we might go a long way in achieving respect for technical skills and competencies."

In the same mood a recent educational psychologist Dr. Frandsen, has declared:

> We cannot achieve an encyclopedia coverage of knowledge nor can we predict exactly what specific knowledge we shall need in the future. We have thus been forced to reorient our thinking. We are beginning to recognize that learning how to learn and how to solve problems is more important than accumlating a store of knowledge.12

Finally, in this connection educators should be constantly reminded of the Educational Policies Commission, possibly our most far sighted educational organization, which in 1961 in its notable document, *The Central Purpose of American Education* , declared that problem solving and critical thinking is the central and all pervasive purpose of American education, permeating and vitalizing all other educational objectives. Helping early adolescents to develop skill and power in problem solving and critical thinking is the present world of multiplying problem situations is a basic responsibility now developing upon junior high school educators. It is one educational confrontion youth must meet in ever increasing volume in the tomorrows. In all probability it is the greatest single help we can provide for the education of the early adolescent.

In conclusion, may I make explicit what I hope has been implicit in my remarks this evening. The education of the early adolescent must be based upon a radically different approach than the concept of education conceived by the Committee of Ten, whose ideas brought the junior high school into being, which has dominated this school throughout most of its history and still does in a large segment of the schools that call themselves junior high schools as well as those bearing the more recent title of "middle schools."

The education offered the early adolescent must be realistically functional in purpose, psychologically and socially meaningful in curriculum organization, pedagog-

3

ically sound in classroom and learning procedures. You will note that as I have discussed the education of early adolescents the approach has been in terms of the behavioral competencies needed by youth and their implications for the world in which he lives, and not in terms of an obsolete framework of meaningless subject type orientation.

FOOTNOTES

1 James M. Glass, "Tested and Acceptable Philosophy of the Junior High School Movement," *Junior-Senior High School Clearing House*, 7:334, February, 1933.

2 William M. Proctor and Nicholis Ricciardi (Editors) *The Junior High School, Its Organization and Administration*. (Berkeley) Stanford University Press, 1930.

3 Quoted in C.O. Davis, "A Distinctive Training Curriculum for Junior High School Teachers," North Central Association Quarterly, 8:507, April, 1934.

4 Ralph W. Pringle. *The Junior High School*, New York: McGraw-Hill Book Company, Inc. 1937, p. 68.

5 *The Junior High School Program*. Atlanta, Georgia. Southern Association of Colleges and Secondary Schools, 1958, p. 5.

6 Committee of Junior High School Education, NASSP, "Recommended Grade Organization for Junior High School Education" *Bulletin of the National Association of Secondary School Principals*, 43: 40-42, September, 1959.

7 William W. Wattenberg, "The Junior High School -- A Psychologist's View," *The Bulletin of the National Association of Secondary School Principals*, 49: 34, April, 1965.

8 Ibid, p. 36.

9 Robert J. Havighurst, *Developmental Tasks and Education*. Second Edition. New York: Longmans, Green and Company, Inc., 1952, p. 33ff.

10 ASCD, The National Education Association, *Fostering Mental Health in our Schools*, 1950 Yearbook, Washington: The Association: 1950, pp. 84-87.

11 Alfred North Whitehead, *Adventures of Ideas*. New York: The MacMillan Company. 1933, p. 117.

[12] Arden N. Frandsen, *Educational Psychology: The Principles of Learning in Teaching*. New York: McGraw-Hill Book Company, 1961, pp. 4-5.

INTRODUCTION TO THE SPEAKER

DR. WILLIAM GRUHN

In an observance of the basic philosophy of early adolescent education questions soon arise as to the relative merits of the Middle School, Intermediate School, and the Junior High School in serving the basic social and educational needs of this age group. Should changes be made, innovations be suggested, or new ideas be expressed if there is little indication that the traditional organization has failed in achieving the accepted goals ? Many theorists have maintained that the junior high school has succeeded in many of its fundamental purposes. Under the circumstances it would seem appropriate to look at grade organization, as such, and attempt to ascertain its effect upon the education of the early adolescent.

Probably no man in the country comes better equipped, by knowledge and experience, to speak to this issue than Dr. William Gruhn of Connecticut University. Dr. Gruhn, Mr. Junior High School, to many, is noted for his travels around the country in which he speaks with almost evangelistic zeal on the issues and strengths of educational practices for the early adolescent. His book, The Modern Junior High School, co-authored with Douglass, is now being prepared for a third edition, giving some indication of the amount of interest it has engendered in the field.

GRADE ORGANIZATION FOR EARLY ADOLESCENTS

WILLIAM T. GRUHN

1. INTRODUCTION

The nature of early adolescents and the program appropriate for them are being discussed by other speakers. My assignment is to discuss with you the grade organization appropriate for early adolescents, and more specifically, the following question: What are the advantages of the various grade plans for a school which includes early adolescents ?

Several considerations should be emphasized in discussing this problem. First, the intermediate school, whatever grades it may include, is a part of the total program of elementary and secondary education. One cannot discuss the grades that are the most appropriate for the intermediate school without some attention to the grades of the lower elementary school and those of the upper secondary school. Second, an educational program appropriate for young adolsecents should be emphasized, whatever the grade organization may be. Third, consideration should be given, not only to what is now the program of the intermediate schools, but what type of program might well be offered there. Fourth, consideration should be given primarily to the educational program and the nature of the pupils to be served, rather than administrative, economic, and other factors. It must be recognized that, in certain communities, such factors as pupil enrollments, the buildings presently available, school district organization, and local traditions may be significant factors in any discussion of grade organization. For the purpose of present discussion , however, I would like to emphasize the educational, psychological, and social implications of the grades appropriate for a school for young adolescents.

It is well to recognize also,that, in education, as in other walks of American life, there are a few answers that are clearly black or white. The mere fact that, for over 100 years, we have had various types of grade arrangments in our elementary and secondary schools in America alone is evidence that educators and parents apparently have seen advantages for various grade plans. That certainly is true in a discussion of the grade organization for the elementary and secondary schools today. In some communities, one form of grade plan rather than another may be most appropriate, I wish, therefore, to take a positive approach to this discussion of grade organization for early adolescents. That is, I should like to suggest the relative advantages of the several different approaches to the grade organization of the intermediate schools.

May I suggest that we examine the grades most appropriate for young adolescents as follows: 1. the historical basis for the intermediate schools; 2. the psychological and social basis for the grades of these schools; 3. the experience of school administrators with various types of grade organizations; and 4. my own point of view concerning the various types of grade organization for schools for early adolescents.

2. HISTORICAL BASIS

The first public high school was established in Boston in 1821, with a three year program. It admitted boys who were at least 12 years old and who qualified on an examination in reading, writing, English grammer and arithmetic. In the next three quarters of a century the elementary and the high schools developed independently of each other. The high schools at various times and in different states and communities consisted of two, three, four or five years. The elementary schools by 1890, in the South consisted of a 7-4 plan; in the Middle Atlantic, the Middle West, and the West of an 8-4 plan; in New England of either an 8-4 or a 9-4 grade system. Just why these different grade plans emerged in different parts of the country, we do not know.

Beginning about 1890 much attention was given by leaders in American education to developing a well-unified program of elementary and secondary education. The first suggestion to gain national recognition was that of the Committee of Ten on Secondary School Studies of the NEA. Although this committee was concerned primarily with a secondary education, it made suggestions for a 12 year unified program of elementary and secondary education. Furthermore, it suggested as a possibility a six year program of secondary education.

During the years following the publication of this report in 1894, one committee or commission after another made recommendations concerning the reorganization of the elementry and secondary schools. With one exception, namely, the Committee of Fifteen in 1895, every committee and commission which studied the American system of education after 1894, either suggested or strongly recommended a 6-6 division between elementary and secondary education.

The first suggestion concerning the sub-division of elementary and secondary education into lower and upper levels was made by a group called the Pettee Committee at a conference of school administraors at Western Reserve University in Cleveland in 1902. The Pettee Committee had requested the opinions of 200 teachers, principals, and school superintendants concerning the division of time between elementary and secondary education. On the basis of its study, the commission recommended that the total program of education be divided into three parts: primary- 6 years; secondary-6 years; and college and university-6 years . The committee further recommended that each part be sub-divided into lower and upper levels, including a lower and upper high school, each of three years. The committee recommended, furthermore, that the program offered in grades 7 and 8 be modified and that it be well integrated with that of grade 9.

Further support of a lower high school of three years came from Paul H. Hanus, professor of the history and art teaching at Harvard Uuniversity, and one of the early leaders in developing a unified program of elementary and secondary education. Professor Hanus at the annual meeting of the Harvard Teachers' Association in 1903 supported, with some modifications, the unified program of elementary and secondary education proposed by the Pettee Committee, including a lower and upper high school of three years each. Also in 1903, Professor David S. Snedden, then of Stanford University, indicated his support of a six-year program of secondary education, including a lower high school of three years. Professor Snedden suggested that the curriculum of the lower high school be differentiated into two courses--one emphasizing manual training and technical work, the other foreign languages and mathematics. These early suggestions for a lower high school were always considered as part of a well-unified program of elementary and secondary education, but with specific recommendations for a broader and more flexible program beginning in the 7th grade, one that would provide greater challenge for young adolescents.

In 1905, Charles S. Hartwell of Brooklyn Boys' High School was the first to emphasize a separate administrative organization for the lower high school, though still a definite part of a six-year program of secondary education. Hartwell suggested that the first year of the high school be combined with grades 7 and 8, and that departmentalized teaching, promotion by subjects, and a broader curriculum be introduced. This was followed by similar suggestions from Hartwell and other educators in the next several years.

Beginning in 1910, the junior high school, which usually included grades 7-8 or 7-8-9 was well on its way. A three year program for young adolescents, always, part of a unified elementary and secondary program, was consistently supported throughout the next decade by such educational leaders as Thomas H. Briggs of Columbia University, Charles Judd of the University of Chicago, Philip W.L. Cox of New York University, Calvin O. Davis of the University of Michigan, and many others. There were numerous types of grade organization for early adolescents which developed during these years. In small urban and rural communities, where the enrollments were small, the program for early adolsecents was usually developed as part of a six-year secondary school. Where the enrollments justified separate schools, junior and senior high schools of three years each were most common. There were always other types of grade organization, however, including schools with grades 7-8, 6-7-8, and some with grades 5-8. Although they were most often called junior high schools, in some places they were referred to as intermediate schools.

During the entire period from 1892 to 1918, however, no strong voice came out in support of a four-year program of secondary education. Every committee or commission, except one, from 1892 to 1918 supported the idea of a six-year secondary program. Furthermore, every leader of prominence who addressed himself to the subject likewise emphasized the desirability of a six year program of secondary education. When lower and upper divisions in secondary education were suggested, they were three years each, with grades 7-8-9 in one, and grades 10-11-12 in the other. The historical development of our secondary schools may not, of course, be reasonable justification for continuing any particular plan. It is nevertheless important to know that then American educators in the past gave serious thought to the school for early adolescents they consistently urged that it include grades 7-8-9 and that it be part of a unified program of elementary and secondary education.

3. PHYSICAL, PSYCHOLOGICAL AND SOCIAL BASIS

The physical, psychological and social development of children have always received much consideration in any discussion of the grades appropriate for the elementary school and secondary school. Several considerations have a particular bearing on the grades appropriate for early adolescents today. First, there is evidence that the onset of pubescence occurs earlier than a half century ago, for girls probably as much as a year to a year and a half. The average for the beginning of pubescence for girls, according to at least one study, is twelve and a half to thirteen years as compared with 14 years at the beginning of this century.

The school for early adolescents, however, has always been more concerned with the differences in maturation among individual youth, than with averages. There is today, as in the past, a wide difference in the age at which individual children mature. According to one author on child growth and development, pubescence begins sometime between 9 and 17 years of age. Another author on adolescence suggests that two junior high school boys, 13 years of age, can be five years apart in this particular phase of maturity. There are likewise other differences among individual pupils in the age at which they mature- in height, weight, strength, emotional stability, and social development. These differences in the age of maturation for individual children are far more important in studying the grades most appropriate for early adolescents than any statistical average of maturation.

A second consideration concerning the grades appropriate for early adolescents is the great change that has taken place in the sophistication of our society, and especially that of older teenage youth. The older teenage society today is a society that lives on wheels, with a large community into which its social life extends. The hours they keep, the places they go, the freedom from adult supervision, and the informal boy-girl relationships of older teen-agers is at a sophisticated level that would have shocked their grandparents of two generations ago. What is more, sophisticiation among older youth even now continues to accelerate, with an apparent increase in sophistication in the last five to ten years. This is in part a product of our affluent society, the attitudes of adults toward the activities and behavior that they are willing to accept for older youth, and other factors.

The activities of older youth are important in any discussion of early adolescents because it is the older youth that the younger one emulates; it is the older teen-age society in which they will soon participate; and it is for that society that they, as early adolescents, must develop wholesome attitudes, appropriate values, and the social maturity to make intelligent decisions and judgements.

Recently I read one author who suggested that there is a wide difference between the maturation of seventh and ninth grade pupils. The differences are even greater, however, between ninth and twelveth grade pupils, not only in growth and development, but, even more so, in the behavior and activities which educators and parents consider appropriate for them.

This is revealed particularly by an examination of the social behavior and conduct codes which have been prepared for teen-age youth by teachers, parents, and students in some communities. The behavior, activities, and supervision recommended in such statements, many of which I have examined, consistently suggest more restrained and less sophisticated activities for pupils in grades 7-8-9 than for grades 10-11-12. Furthermore, they differenciate between the activities appropriate for the seventh, eighth, and ninth grades, though not for grades ten through twelve. Differentiation of activities by grades of young adolescents is, indeed, a common practice in junior high schools and other intermediate schools.

A third consideration in the physical, psychological, and social development of youth is the emphasis today by our society through its laws and customs on age 16 as the dividing line between young and older adolescents. There is no more distinguishing mark between young and older adolescents than the driver's license, and ultimately the teenage automobile. In 44 states and the District of Columbia a driver's license may not be obtained before age 16, except as a learner's or junior permit. The driver's license gives youth much more freedom from adult supervision and control. Furthermore, most states and federal government have established age 16 as the most common minimum employment age. Although some states permit youth to be employed under 16 in some occupations and at certain hours, minimum wage laws, work permits, and limited opportunities for employment tend to restrict employment to older youth. The maximum school attendance age likewise is 16 in most states, further distinguishing between young and older adolescents. It is not likely that our society will soon reverse itself concerning the activities and behavior that now distinguish young from older teenage youth. This too should be considered in any study of schools for early adolescents.

A fourth consideration in the growth and development of youth is the great increase in juvenile delinquency. According to the Uniform Crime Reports for 1964, issued for the Federal Bureau of Investigation of the United States Department of Justice, the number of arrests of youths arise sharply after the age of 12, increases to age 15 or 16, and then for most juvenile offenses declines quite abruptly. The incidents of juvenile delinquency have been almost as large in suburban areas as in the city. If one is to study an age group as it relates to the grade organization of the school, there should be some awareness of the age at which citizenship attitudes and activities of youth present serious problems to educators, parents and other citizens.

These are, then some of the problems concerning the physical, psychological and social development of youth which may have a bearing on the grade organization appropriate for early adolescents. It would indeed be optimistic to suggest that our problems with youth may be sharply changed by shifting the grade organization. It must be recognized however, that in any intermediate school for early adolescents there should be flexibility in the activities and program; the hours, nature and character of these activities should be restrained; and educators and parents should adapt these activities so that they are appropriate for each age level throughout adolescence.

4. EXPERIENCE OF SCHOOL ADMINISTRATORS

Since 1900, we have had several types of grade plans of schools for early adolescents. The most common have included grades 6-7-8, grades 7-8 and grades 7-8-9. There have also been many schools with grades 7-12. Some of these plans were originally established because of local administrative considerations. Others were organized because educators and parents believed that they offered the best plan to provide an educational program for early adolescents. We have had therefore, considerable experience with various types of grade organization. This experience should help us in our present discussion.

By 1959, the latest year for which figures are available, the most common grade organization for young adolescents was the junior-senior high schools (grades 7-12), with 42% of all secondary schools organized on this plan. Information on other types of grade plans was obtained in a study by Harl R. Douglass, and myself in the spring of 1964 and 1965. This study included all of the junior high schools in state directories, with more than 300 pupils and a separate grade organization. On the basis of 3703 replies (86%), the most common plans were as followsL grades 7-8-9-- 83%; grades 7-8-- 13%, grades 6-7-8-- 4%.

This study sought information concerning certain aspects of the organization of these three types of schools and opinions of administrators about the desirability of each plan.

Requests for information were sent to principals of all schools with grades 6-7-8 and grades 7-8, and to one in seven of the schools with grades 7-8-9. Replies were received as follows: principals of grades 6-7-8--92%; grades 7-8--91%; and grades 7-8-9--87%. In 1963 a similar request was sent to persons responsible for secondary education in state departments of education with 100% replies.

Some general information may be of interest concerning these schools. The numbers of all three types of schools has increased in recent years more rapidly than during any other period since 1910. Schools with grades 7-8-9 were found quite generally in most of the 50 states and the District of Columbia. More than half of those with grades 6-7-8 were in three states--Illinois, Michigan and Texas, while more than half of those with grades 7-8 were in six states. Some schools with grades 6-7-8 and grades 7-8, like those with 7-8-9, have been in existence for many years.

Most schools with grades 7-8-9 in 1964 were located in buildings built especially for junior high schools (69%), while relatively few were in former high school buildings (16%). Schools with grades 6-7-8 were least frequently,among the three plans, in buildings originally built for junior high school use (41%), and most often in former high school buildings (33%).

In 1964, schools with grades 7-8-9 more than any other plan (74%) were originally established with these grades. Schools with grades 6-7-8, on the other hand, were least often established with these grades (39%). Schools had plans in 1964 to change to ther types of grade organization as follows:grades 7-8--34%, grades 6-7-8--27%; and grades 7-8-9--6%. Furthermore, more than half of the schools with grades 6-7-8 and grades 7-8, according to the principals, were established primarily because buildings or school district organization made it easier to have their grade plan. In fact, only a small percentage of these schools (grades 6-7-8 and 7-8) were established on these plans primarily because they were considered best for the educational program.

We asked rather specific questions of the principals, in the spring of 1964, concerning the grade organization which they believed was best for the junior high school. The replies were tabulated by types of schools. The principals who had experience with more than one plan were identified and their replies were also tabulated. The same questions were also sent to state department representatives in secondary education.

On most of the questions, the principals of all types of schools and representatives of state departments indicated that, in their opinion, grades 7-8-9 was considered best for:

1. attracting and retaining competent counselors and

teachers of mathematics, science and foreign languages.
2. for developing a program in industrial arts, home economics, music, art, and physical education.
3. for providing programs in sports and other class activities.

The best opportunity for a superior academic program is provided by grades 7-8-9, according to most principals and state department representatives, except for principals with grades 6-7-8. Grades 7-8-9 furthermore provide the best age group and the best opportunity for the total educational program, in the opinion of most of the principals, except those with grades 6-7-8, who were divided on these questions.

The general conclusion from this study must be that, in the opinion of most of the principals and state department representatives, grades 7-8-9 provide the best opportunity for education program for the junior high school, and consequently, for the early adolescent.

5. BEST PLACE FOR THE NINTH GRADE

In the spring semester of 1965, a request was sent to the principals of all schools with grades 6-7-8 and grades 7-8, and to one in seven of the schools with grades 7-8-9, concerning their opinions as to the best place for the ninth grader. Replies were received as follows: pricinipals of grades 6-7-8--72%; grades 7-8--81%; and grades 7-8-9--85%. Replies were tabulated according to the types of schools. Principals with previous experience as principal of a four year high school (grades 9-12) were identified, and their replies were tabulated.

The program of the school and the behavior of the ninth grade pupils apparently are influenced by the place where the ninth grade is located, in the opinions of most of the principals of the three types of schools. There were more differences of opinion concerning the place for the ninth grade, however, than the grades which are best for the junior high school.

In the opinion of most of the principals of all three types of schools the junior high school is the best place for the ninth grade pupils to have experiences in leadership and citizenship. Ninth grade pupils furthermore, are less likely to begin early steady dating and girls are less likely to begin dating older boys when the ninth grade is in the junior high school, according to most of the principals in all three groups. The junior high school likewise is the best place for the ninth grade for developing wholesome boy-girl relationships and for delaying undesirable social sophistication, at least in the opinion of principals of schools with grades 7-8-9, or grades 7-8. Principals of schools with grades 6-7-8 were dividied in opinions, however, as to the best place for the ninth grade on matters of sohpistication and boy-girl relationships.

With respect to academic studies for the ninth grade, the principals were divided in their opinions as follows:

1. most principals with grades 7-8-9 believed that the best place is in the junior high school;
2. those with grades 7-8 were about equally divided in their opinions between the junior and the four year high school;
3. most principals of grades 6-7-8 considered the four year high school the best place for ninth grade academic studies.

The principals were also asked where, in their opinion, was the best place for the total educational experience of the ninth grade. Two groups of principals-- those with grades 7-8-9 and those with 7-8-- consider the junior high school best for the total ninth grade program. Principals of junior high schools with previous experience as principals of a four year high school consistently indicated on all questions that, in their opinion, the best place for the ninth grade is the junior high school.

The opinions of principals of different types of schools therefore, are more divided concerning the best place for the junior high school. Even so, there is considerably more support for placing the ninth grade in the junior than in the four year high school.

There are several other questions which may well have been asked concerning the best grade organization for early adolescents. For example,

1. which types of schools are most likely to attract men teachers ?

2. where can the ninth grade make the best contribution to the activities, stability, and total program of the school ?
3. which school is most likely to attract competent, professional leadership, especially in areas where specialized preparation is required ?
4. are the greater pressures of the high school for academic achievement, student activities, and social functions appropriate for the health of the 13-15 year olds in the ninth grades ?
5. where are the most experienced and competent teachers in the high school likely to serve--in the ninth grade or in the upper grades ?
6. how readily will the faculty of the four year high school, with its experience with selected students, adapt its philosophy and practices to all the pupils who remain in school into the ninth grade ?

These questions, like others, may well be considered by educators and parents in deciding on the grade organization most appropriate for early adolescents.

6. RECOMMENDATIONS FOR GRADE ORGANIZATION

My own point of view concerning the grades that are the most appropriate for a school for early adolescents is as follows:

1. a school with grades 7-8-9, would in most situations, be my first choice. There is reason to believe that a school that includes the ninth grade may be more attractive to competent teachers in some subject fields such as science, foreign languages, mathematics, musci, art, industrial arts, and home economics. Furthermore, the junior high school is the most appropriate place for the ninth grade. The social activities and boy-girl relationships for the ninth grade pupils may be maintained at a less sophisticated level, and undesirable expressions of sophistication can be more readily discouraged. The preparation of youth for responsible citizenship in our society today is particularly urgent during the early adolescent years, and especially ninth grade pupils. The position of the ninth grade in the four year high school makes it difficult indeed to offer them the experiences in leadership and responsible citizenship which they so badly need.

2. A school with grades 6-7-8 or grades 7-8 is certainly appropriate in communities where, for administrative, school districts or other reasons, grades 7-8-9 are not feasible. Schools with grades 6-7-8 have the advantage of retaining pupils in the same school community for a period of three years, contributing to greater stability in their growth toward responsible citizenship. Certainly, the sixth grade can fit well into the program of a school for early adolescents. Any intermediate school can be so organized that the acitivities can be adapated to meet the differences that one finds among pupils from one grade to another. My greatest concern with schools with grades 6-7-8 or grades 7-8 is again the ninth grade. The four year high school, as compared with intermediate schools emphasizes all school activities, with the social, athletic, and other acitivities organized largely on an all-school basis. Communities where a school with grades 6-7-8 seems to be the most appropriate should, in my opinion, give serious attention to the activities, the responsibilities, and the program for the 13-15 year old pupils in the ninth grade.

3. A school with grades 5-8, in my opinion, has the same advantage and limitations of a school with grades 6-7-8. In such a school there can be the flexibility necessary to meet the needs of pupils at various age levels. Although there is considerable difference in the maturity of children ages 9 and 10 in the fifth grade, compared with those who are 13 and 14 in the eighth grade, activities can be planned to meet the needs of the pupils at these grade levels. A school with grades 5-8, like the school with grades 6-7-8, may be better integrated with the program of the elementary school. The traditional break in our school system, however, has been the most serious between grades 8 and 9. This sharp break in our schools is more likely to persist if we have an intermediate school of grades 5-8. The ninth grade continues to present a serious problem. In fact, the ninth grade pupils are most critical with problems of sophistication, social development, and preparation for responsible citizenship.

These are, then some of the considerations that educators and parents should keep in mind as they approach the grade organization in their elementary and secondary schools. The grade organization should not be an end in itself. It is of importance only to the extent that it contributes to the most effective educational program for pupils at all age levels. Once a community has decided on a particular plan of grade organization, every attention should be given to developing an educational program that meets the needs, interests, abilities, and characteristics of children and youth at all age levels. This is the real challenge of participants in this conference.

FOOTNOTES

1. Marian E. Breckenridge and Edward Lee Vincent, Child Development: Physical and Psychological Growth Through Adolescence. Philadelphia: W.B. Saunders Co. 1965.

2. Ira J. Gordon, Human Development: Birth Through Adolescence. Harper and Brothers, 1962 Chapter XIV.

INTRODUCTION TO THE SPEAKER

ALAN C. GREEN

As continuing thought is given to the purposes and objectives of middle schools, it soon becomes evident that differing objectives may best be achieved by the use of differing methods which may then be best implemented in differing physical environment. Under these circumstances it seems appropriate to consider the surroundings which might be maximally effective for the learning of early adolescents. What provisions should be made in the school plant for such proc edures and materials as individualized instruction, large group instruction, instructional material centers, and other innovations currently being considered.

In order to ascertain the type of school building which might best suit the rationale of the middle school, Mr. Alan Green of the Architectural Research Department at Rensselaer Polytechnic Institute was contacted. Mr. Green whose specialization is in the field of school architectures, after conferences with educators who are knowledgeable in the area of the middle school education, has developed an architectural milieu in which this learning might well take place. While Mr. Green's thoughts should not be represented as the establishment of a prototype middle school many of his ideas will be of great value to those concerned with the construction of new buildings in the middle schools.

THE MIDDLE SCHOOL- SOME ARCHITECTURAL IMPLICATIONS

ALAN C. GREEN

This morning I'm certainly not going to turn on the slide projector and show you a prototype middle school, or the middle school or the answer. I'm certain that all of you will soon discover that there is no such thing as the single middle school, and no single answer. Each of your districts will have to spell out those particular requirements for the middle school that meets your own needs. This will result in widely differing school plans. The middle school will be determined by many different factors- size and enrollment, relationship to the community, the kind of community, community use of facilities, the curriculum, the characteristics and ambitions of your students, and the taxpayers and their support.

So it is safe to say that there is no such thing as the middle school, and I don't want to deal with prototype or stock plans. Rather, I thought it would be more interesting to deal with some of the basic qualities of the middle school and from these we can draw some facilities implications. Then I want to deal with some of the components of space which may be appropriate for you and your kind of middle school; you may want ot reject some as being different from your philosophy and needs. I hope to illustrate a number of these components or building blocks with slides; it is the task of your architect and your building committee to put together these and other building blocks in a manner that will meet your particular needs.

Now I would like to review some of the functional characteristics of the middle school and what these may mean in terms of architecture. In the reading that I have done on the subject, the key word that I have encountered is transitional; the middle school provides an environment which carries the child from the more or less self-contained elementary school into a more permissive high school. Maybe the middle school can contain facilities which assist in this transition. It is possible that in the lower end of the middle school, we should deal with some self-contained classrooms which can be quickly converted to allow students to meet in various size groups to experience some other kinds of educational activities when these are appropriate. Then as we move up through the middle school, possibly we want to have facilities that provide more and more opportunities for changes in groupings and which allow for teaming, for seminar groups, and so on.

The key is mixture. We may be dealing with a school that represents a mixture of facilities or environments which are necessary to move the student in this transitional period from elementary to high school through the middle school.

If it is that transitional, let's look at the children that occupy this environment. Certainly they are active youngsters, and we can plan spaces which create the need for students to move from space to space. I don't think there are any problems now about having furniture that students can lift and move around and rearrange. We want these students, because of their vitality and activeness, to move through the day from environment to environment, particularly in the higher and middle school. Certainly we need many kinds of recreational facilities and I think this leads to a consideration of how you can handle the site and what kinds of things you can provide at different seasons of the year to make a more complete use of the site, rather than having everything contained within the physical plant.

I think we can agree that a 50-minute period or a fixed period of time may not be most appropriate for all kinds of learning. Maybe we should be talking about flexible scheduling using modular incremental time periods since a 50-minute period may be too long in some instances and too short in others.

One other characteristic of these youngsters is the great variation of development at these ages- social, physical, and intellectual. From this we can gather that we need facilities for counseling and guidance, and which provide a close relationship between student-teacher.

Some middle school youngsters will be ready for non-gradedness, individualized instruction or independent research projects, while others will not be. The facilities will need to reflect these variations in student development. The students in the middle school age bracket also need opportunities to explore, to sample, to test, to try out lots of different things, and I gather from this that the library, the resource center, the instructional materials center, or whatever you want to call it, becomes a very important and integral part of the middle school. I hesitate to put a name on this space of facility; we simply want to say that all kinds of resources-records, films, experiments, demonstrations, exhibits, and books- should be made readily available for students to use quickly and informally.

Because of the need to explore, to sample, we need some multi-discipline facilities-physical and natural sciences, creative arts, and technical skills. These should also provide the opportunity for some team-teaching and team-planning in order to bring related discipline to the students. Here is a good opportunity to use media of various types- television, films, and slides- to bring to students some of the experiences which they might not have otherwise but which can be made available through the technology of this day and age. We also want to plan exhibition spaces, gardens, greenhouses, and all kinds of ways to utilize the natural site to provide opportunities for students to sample and to be exposed.

We find in the middle school that the student may be in the position to assume more responsibilities for certain aspects of his own education. We need to provide opportunity for independent study, for research, for self-start learning.

At the same time though, these students need identification or a sense of belonging with their environment. School buildings should be relatively small scale and intimate so the student recognizes and identifies with his school. This is a good place for the school-within-school or the little school concept. Here the unit with which the student identifies contains 200 or 300 or no more than 400 students, but then the total school plant may be made up of several of these units. From this concern with identification has come the concept of a "home-base" or a place within the school with which the student further identifies. It may be a carrel and locker- a place where he can study and keep his belongings. Perhaps administrators and teachers should also be more a part of this concern rather than located up on the third floor.

Part of this matter of identification concerns intramurals and activities within schools and between the "little schools" rather than formal scholastic athletics.

A general characteristic is informality, not a highly structured or highly competitive kind of program. We're not looking for big bands, orchestras, theatricals, and so on; I think this has many interesting implications in terms of theaters, gymnasiums, field houses and auditoriums. These are facilities that many of us feel are required by the community, but often are not required in terms of the educational program or the needs of the schools.

Since the middle school is experimental, we're dealing with new methods and new organizational patterns. I think there are certain aspects of the environment which can reflect this. Certainly rows on rows of self-contained classrooms might not give the character of change and newness that characterize the middle school.

Then finally, there are the variations among the communities and community needs which will affect how the middle school is built and what the role of your particular middle school will be in the community. Will it be simply a school or will it also be a community center ? That's another aspect we must consider but can't generalize.

From these general characteristis we can draw some conclusions now as to building blocks or elements that go together to make up the middle school; I would like to illustrate these with some slides.

As we said at the outset, the transitional characteristics of the middle school may call for more or less self-contained classrooms at the lower level. (Figure 1). This might be a design for such a classroom but it does little more than just provide a traditional space. The same space can be converted, by quickly rearranging lightweight furniture and moving out some dividers, into small group activities, independent study carrels and so on. (Figure 2) On the left hand side you can see a couple of carrels where the students can begin to work independently if it is appropriate for them. In the lower left you can see a space which provides for art, science demonstrations, and experiments.

If we're building new, probably a square shape works out a little better architecturally. In this particular case (Figure 3) focus is towards the corner. Here we developed what you'll see appearing in a number of these models, a media module. This is simply a self-contained cabinet for projectors with wings that open up for chalkboard surfaces and projection surfaces for the overhead.

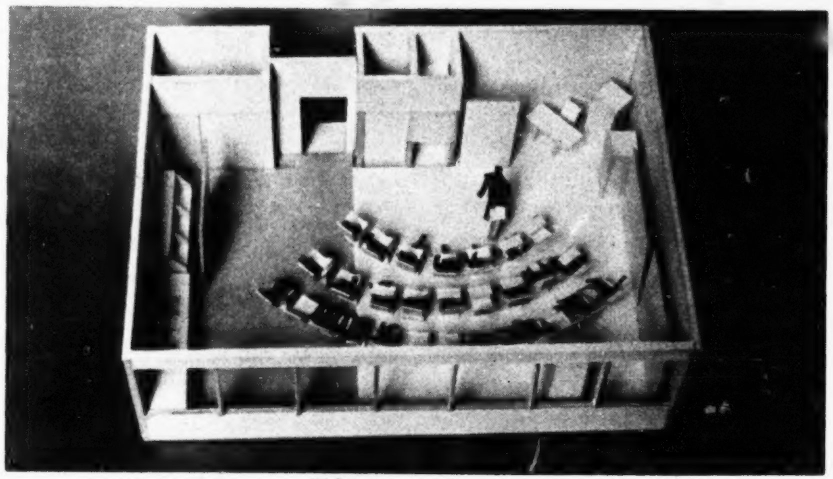

Figure 1

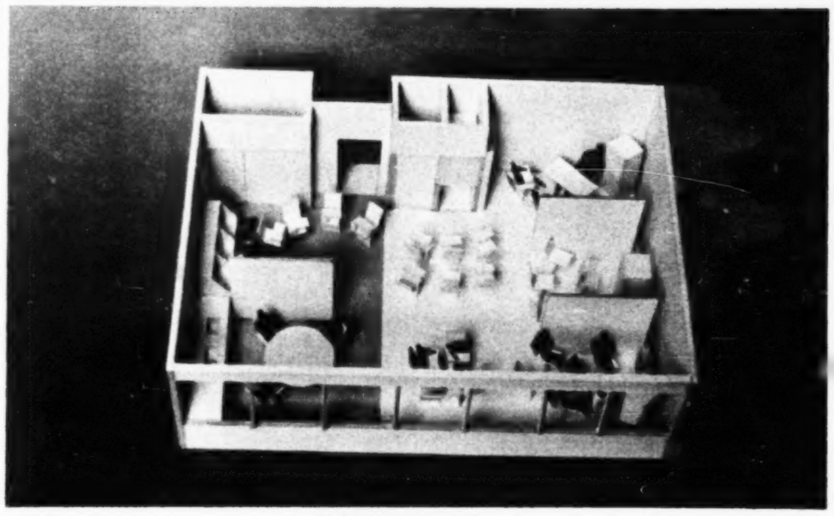

Figure 2

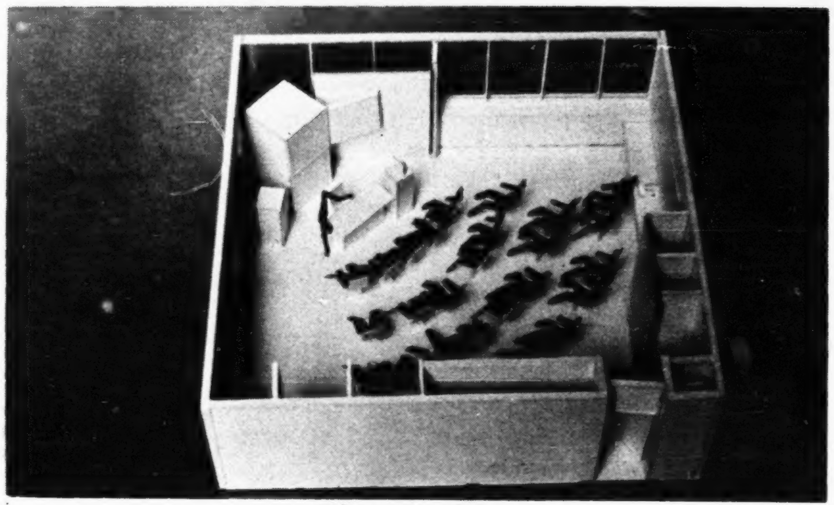

Figure 3

Now as we move on, we talk about opportunities for team teaching and for grouping and re-grouping students quickly, irrespective of time schedule. (Figure 4). Here is basically a self-contained unit of possibly three teams. As you see at the bottom of this model with the double partition opened, you get a room which would house some 70 or 80 students for large group instruction. But very quickly as illustrated in the other two segments of this model, those partitions can be closed and the furniture can be rearranged for traditional groupings and smaller groupings for seminar, experiments, independent study, and so on. This in itself becomes something of a self-contained center for three teams to function, probably almost irrespective of the curriculum in middle school, this should be appropriate.

I think we should admit that we open and close partitions, we also may be buying some acoustical problems; however, I think we are finding better ways of handling the flexible partition.

Also as we move to the middle school we begin to feel the need to introduce some activities in self-contained spaces- a room, for instance, designed specifically for small groups- for seminar, inactive experiences. This is the kind of room that brings students in close contact with the instructor, and other students, and with instructional material. (Figure5) This is an illustration of that media module concept applied to a seminar type space. We built a mock-up of this to show that it could be done for little money-maybe $50 or $60. Maybe you want clusters of these small, seminar facilities as an integral part of your middle school. Through the use of lightweight furniture, the rooms can be rearranged to take on various kinds of instructional functions, depending on how you arrange students and furniture.

I think that we should recognize that when we open and close partitions to create large group space, it probably will not have all the optimum environmental characteristics in terms of light-lines, viewing conditions, acoustical properties, and lighting that you would like. If large group instruction is an important part of the process curriculum methodology, you may want to deal with something more like this, (figure 6) a room seating 70 students where the room is designed to provide a space which supports large group instruction as well as we know how at this stage. A similar room is a mock-up of a large group

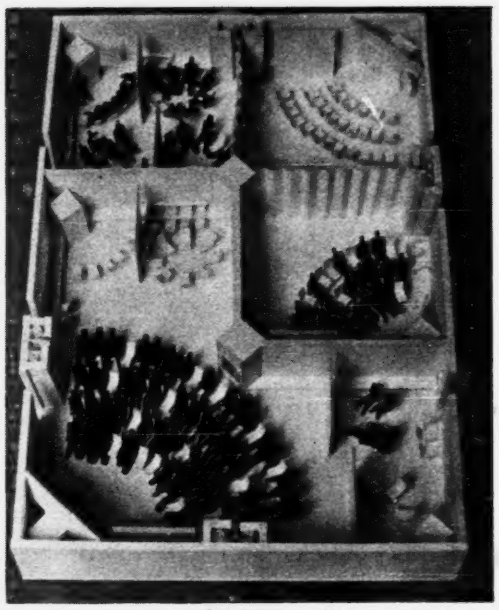

Figure 4

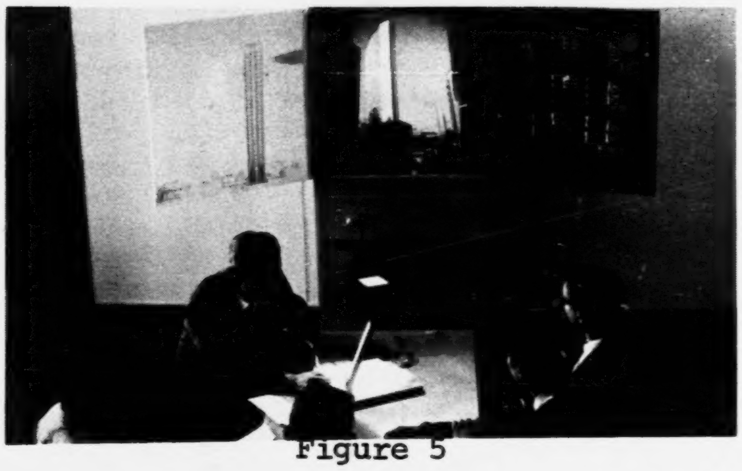

Figure 5

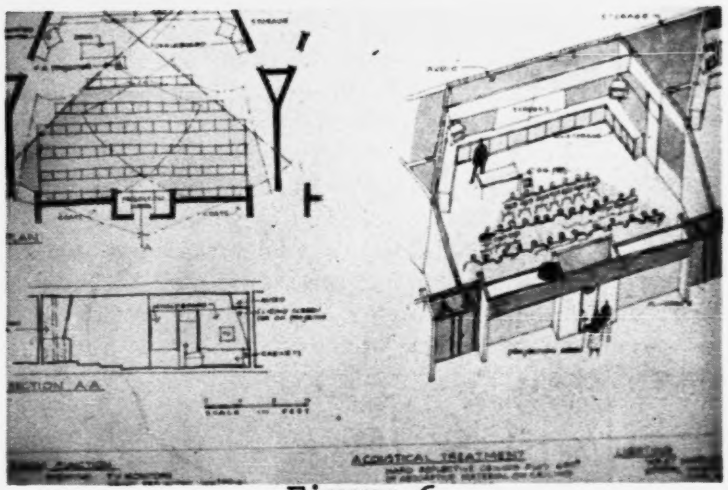
STORAGE
PLAN
SECTION AA
SCALE IN FEET
ACOUSTICAL TREATMENT

Figure 6

instruction space that we built at R.P.I. in an old chapel on the campus.

This concept (figure 7) for a large group space begins to try to group students for interactive experiences where they can discuss back and forth even though it is a large group. It also provides an opportunity for bringing in demonstrations of all types- art sculpture, scientific aparatus- anything brought in for people to see and experience. We are at the same time allowing for interaction and discussion among the students; they aren't passive in this kind of facility but are actively involved.

For the middle school there is some question of the real value of a large auditorium as an auditorium, yet there are times when you want to bring large groups of people together for community activities. This may mean that a divisable auditorium is an appropriate solution for some of the larger group problems for the middle school. In this particular scheme (figure 8) you see that the front of the auditorium has a flat floor and in the back left and right there are two other seating areas for a total capacity of several hundred. The back areas can be closed off by movable partitions and become large group classrooms. This becomes quite a flexible solution to the large group and auditorium problems and has real merit in terms of the middle school.

Some of the things that we are thinking about in terms of the middle school can be achieved by remodeling conventional and existing places. In this country we have several hundred thousand classrooms which are about 28 feet long. What can we do with these, particularly in achieving some of the things we would like in a middle school ? Here is a concept (figure 9) for taking two conventional classrooms and remodeling the space to create the kind of groupings that may be appropriate. We take out the common partition to create medium and large group space, seminar space and a project area.

In terms of the concept of exploration in the middle school, this kind of facility may be appropriate, (figure 10).It's a multi-classroom for sciences; students can be working in this room at a number of different ways. For instance, in the center area a group of students can be working at general science benches. At the same time an instructor can be giving a demonstration or a lecture to this

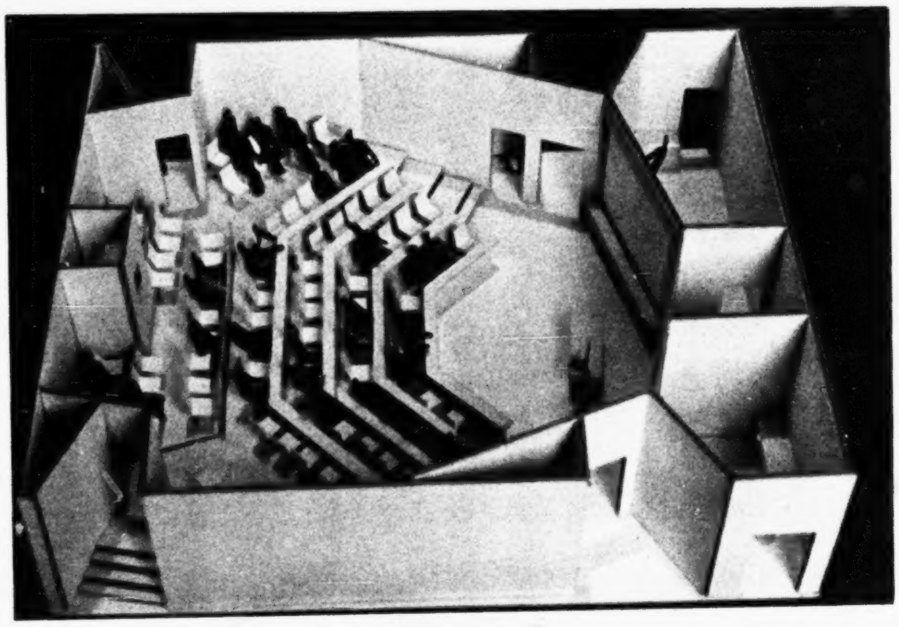

Figure 7

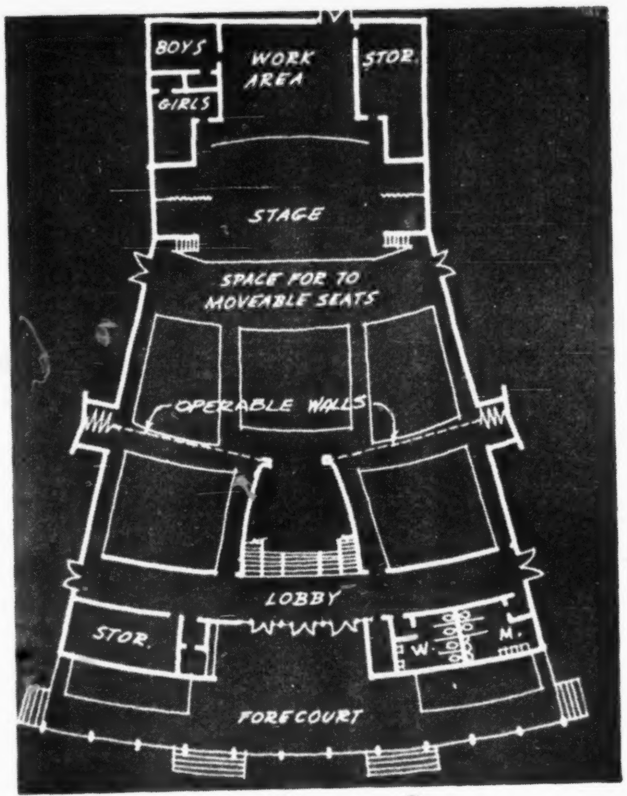
BOYS
WORK AREA
STOR.
GIRLS
STAGE
SPACE FOR 70 MOVEABLE SEATS
OPERABLE WALLS
LOBBY
STOR.
W.
M.
FORECOURT

Figure 8

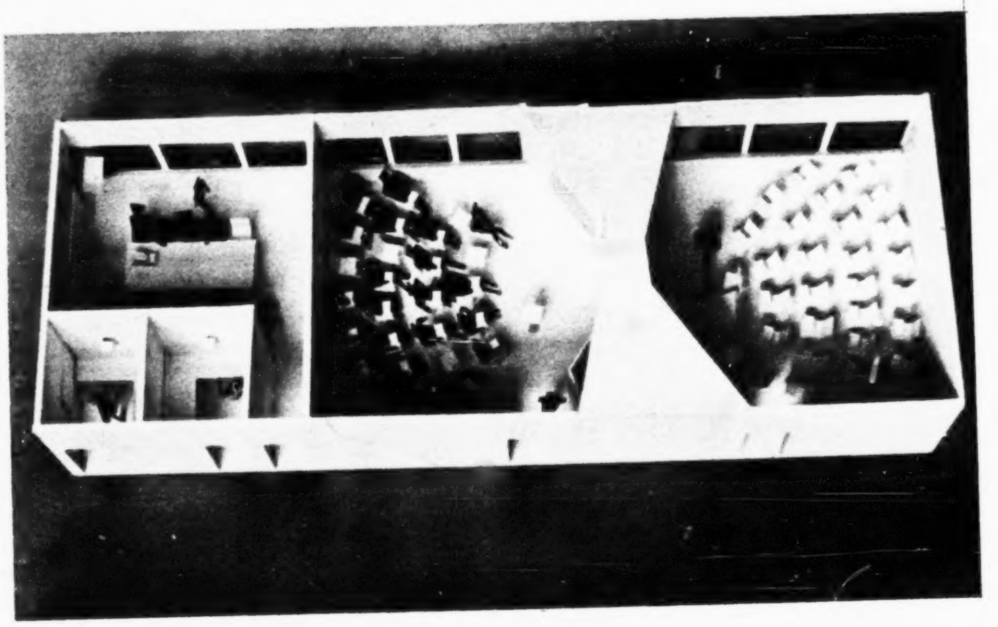

Figure 9

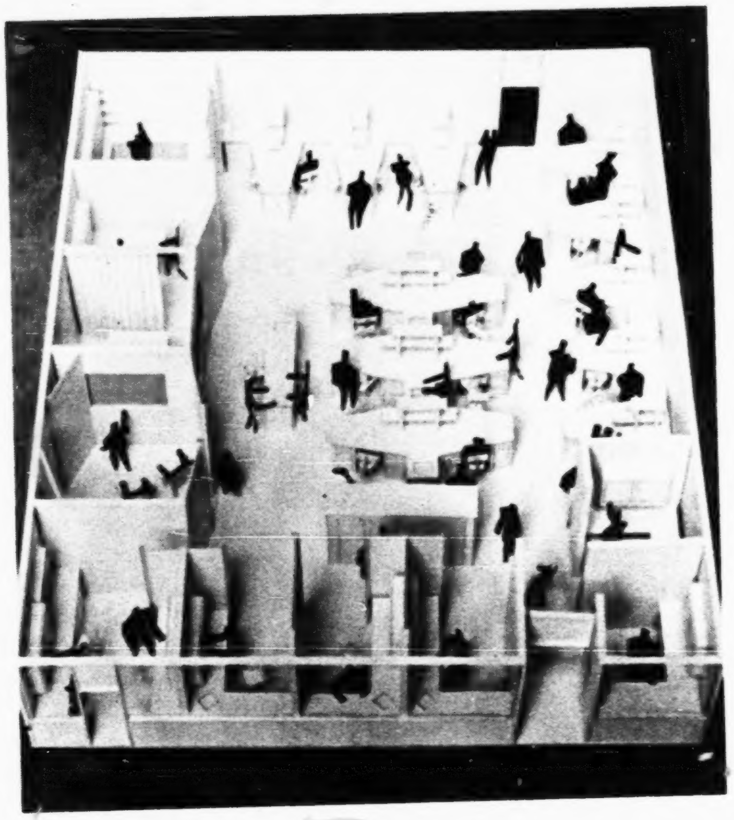

Figure 10

group seated at their laboratory benches. In the various spaces that surround the central area, there are opportunities for seminar groups, for groups of students to work on a project and for independent research of short or long duration. So within this kind of space, exploration in the general area of science can go on in different subdisciplines and in different ways, depending on the character of the student and his ability to assume responsibility for his own learning.

I rather doubt if the formalized language laboratory as we know it today is the only answer. Maybe we should think of it in terms of an audio-laboratory, a space in which students use audio material, whtether in language, drama, music or whatever. This is an example (figure 11) of such a facility which also allows for projection of material if it is related to the audio presentation. A group of 30 or so students can be working in that way, with a smaller group working indepentently or under the guidance of an instructor in the rooms in the upper left and upper right. The audio suite can be used functionally for a variety of different disciplines whenever there is need to introduce audio materials.

Since the student is assuming more responsibility, we need to bring various kinds of learning resources to him and give him opportunities to work independently. This can be achieved in a carrel where he has access to audio and visual materials. It can also be achieved by several students watching a film, each with headphones so other students can be working without audio interference. Sometimes a student needs isolation for independent work and thought. Other times a programmed approach will be used for certain aspects of a course, and a student will check out audio and video materials and work with them in a prescribed manner. There is also need for students to sit and read and gather informally.

Probably from this we can deduce that the resource center, or library, or whatever, provides not only a variety of resources but also a number of different ways in which to use them, as this diagram (figure 12) illustrates. We include what we call a "soft reading" area which is comfortable chairs, with access to magazines, newspapers, and books. We also provide conventional library furniture, some electronic carrels, some small group space, typing and listening rooms, regular carrels and so on.

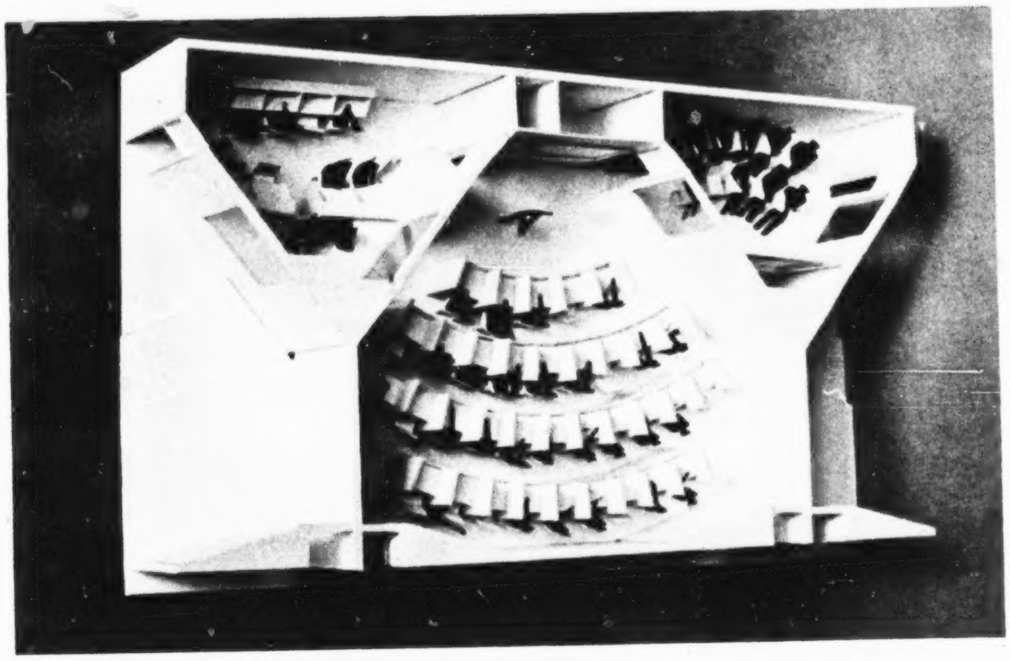

Figure 11

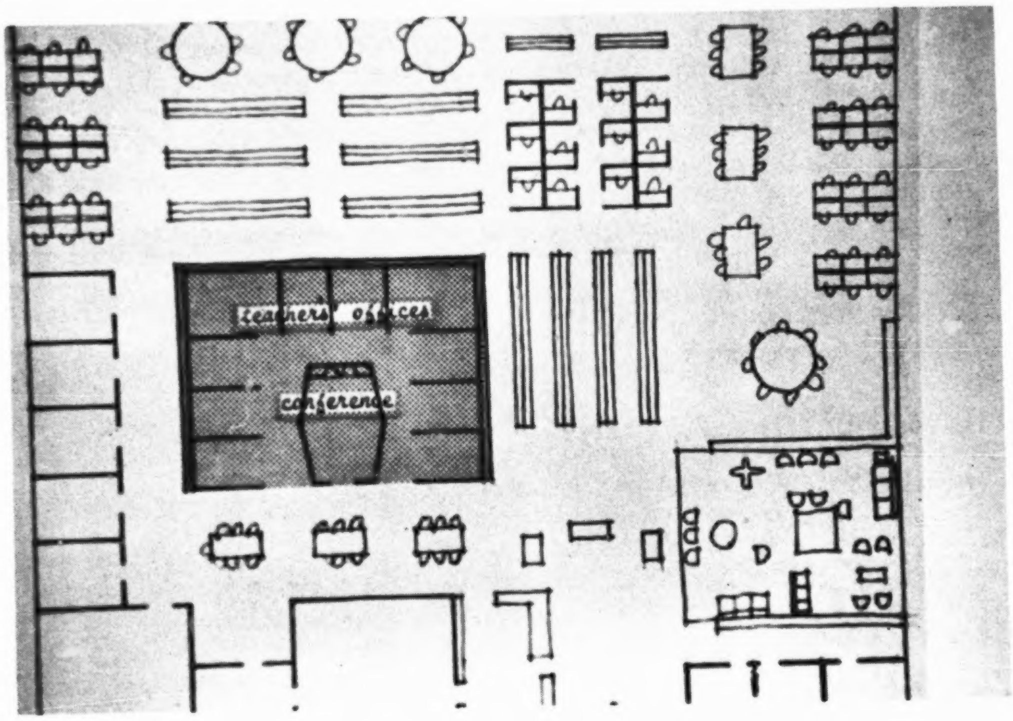
teachers' offices
conference
D

Figure 12

There is another kind of resource accessibility to the teacher. As the teacher moves out of the conventional, self-contained classroom and begins to team and work with his colleagues in planning, he needs to be provided with facilities, which at the same time might make him readily accessible to the students for counseling and guidance. So in the resource center we find a suite of teachers' offices, a small conference area, a place for clerical help, and a space where teachers can produce simple instructional materials. We might begin to think of facilities for teachers even more in terms of instructional space since a double office for a couple of teachers can also be used for conferences, guidance and counseling. Two teacher spaces, side by side, with a folding partition between them can be quickly opened and used for seminars and other instructional purposes.

We indicated that the middle school provides some ideal opportunities for uses of media to bring experiences that might not otherwise be available to students. Of course, the opportunity of using media to bring experiments and community resources to the middle school are developing with our Title III and IV regional centers and educational laboratories. Production centers which may involve significant financial investment may do some very interesting things in terms of what can be brought to the middle school, to the curriculum and to the individual students.

Within a middle school complex, we need to provide for the persons who can produce instructional material for the individual classroom teachers and who can assist in designing learning. An instructional production support center may have a small multi-use studio, audio control and recording space, graphic production, conference areas, shops and so on, and may be located within a school district to support a number of schools. Of course, it may be a regional center supporting a number of districts in a general area.

One of the interesting things that middle school may imply is the matter of how we arrange the school day. (Figure 13)Here on the left hand side we see the conventional pattern organizing the school day in 50 minute periods; in the middle we see the concept of the extended period where the longer time can be used in a lot of different ways; on the right we see the module schedule, and in this case it is composed of twenty minute

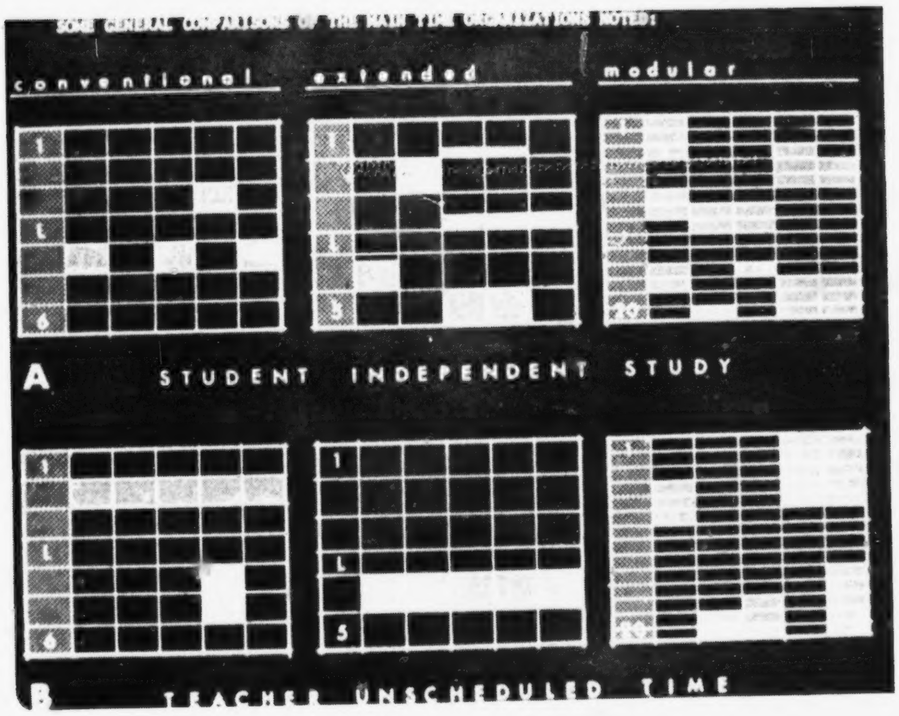
SOME GENERAL COMPARISONS OF THE MAIN TIME ORGANIZATIONS NOTED:
conventional
extended
modular
1
L
6
1
3
5
20
A
STUDENT INDEPENDENT STUDY
1
L
6
1
L
5
20
B
TEACHER UNSCHEDULED TIME

Figure 13

modules. I would like to dwell on this matter of the time module for just a minute. I had a very interesting experience a couple of years ago with a school on the West Coast that was on a modular schedule. It was a high school originally built for 2000 students. They found that by going to the modular time elements, they were getting much better utilization of space, and actually felt that they could increase their enrollment to 3000 students without building new facilities. It did require some remodeling because they found that they were short of seminar space and large group spaces. The thing that impressed me most about that particular school is that every 20 minutes you heard a faint "ding" and a few students would move through the corridors, and all would be quiet again. A few minutes later, a slight "ding" and a few other students would move through the corridors. Never during the school day did you get the entire school population flooding into the corridors. With the opportunities for regionalization, comes the opportunity for computerization in administration, scheduling and organizing the school day. It may well be that we'll be in a position very soon where the organization of the school day can be handled through the use of computerization.

Now when you put all these things together you may end up with a middle school that is a tightly planned package, or one in which the whole school becomes a resource center, or one which is more the campus type with separate units scattered about a large site with some common facility.

As I began the research for this talk, I became somewhat frustrated by the fact that there was no single curriculum, no single instructional methodology for the middle school. I think that transition, variation and exploration are the key factors; there is no single answer. It may be that some of these components that we have talked about today, some of these building blocks, will be appropriate for your program. The way in which you organize them to meet your particular needs will be your answer to the middle school.

INTRODUCTION TO THE SPEAKER

DR. WALTER CREWSON

(PANEL MEMBERS: ANTHONY E. TORINO, AND DONALD BENEDICT)

While investigating the theoretical framework of early adolescent education in all its ramifications, other important pragmatic matters are continually facing the school administrator faced with the issue of changing grade organizations. In New York state these issues become crucial due to the degree of financial support furnished by the State Government. The State Education Department is extremely influential in its associations with the individual school districts in their efforts to effect educational change. One division with the State Education Department, that of School Supervision, is particularly familiar with the educational issues occuring in school districts throughout the state.

Under those circumstances it is most fortuitous that Dr. Walter Crewson, Associate Commissioner of Elementary, Secondary and Higher Education, was available to describe the situation in New York State as seen in his department. Assisting him in a panel presentation are Dr. Donald Benedict, Supervisor of the School Supervision Division, and Dr. Anthony Terino, Head of the Bureau of Secondary School Sypervision. Few men have had as extensive an experience in visiting and evaluating schools during the last few years as the gentlemen on this panel.

CURRENT PERSPECTIVES IN NEW YORK STATE

WALTER CREWSON

Let me begin with the statement that, to my knowledge, the Department of Education, which is the strongest I know, has never in history mandated grade organization. When people call and ask, "May we put this grade in this building?" I always repeat, never mandate an organization. Now if we never mandate an organization, and if our charge is to further the interest of quality education in New York State, then it must be that there has been a long-term conviction, on the part of the department, that there is no magic in organization; that the magic must be somewhere else. The most current practice in the State is for the local school districts to be asking the department. "What about the Middle School?"

Very often the questions can't take any sharper focus than that. What does the department think about the Middle School or other grade organizations? The number of calls makes me wonder if education isn't off on another binge, the type of binge it went on when audio-visual supplements first appeared; the type of binge it went on when radio first appeared, the type of binge it went on when T.V. first appeared. Now I hope you won't think I'm cynical; I don't think I am. I think I'm being very realistic when I say that the educational profession, which we represent, looked to some things as great panaceas, as great solutions to all their problems. When they didn't turn out to be that, they cast them aside to a great extent. We're just in the process of doing this with T.V.; we'll resurrect it again when we determine its best function. Having gone "gung ho" for it, we're going to slough it off because it didn't solve all our problems. I can remember distinctly seven years ago, that an officer of our department predicted that educational T.V. would in a short time be saving the state nearly a billion dollars in educational costs. The purpose was not to save money; the purpose was to improve the quality of education.

When a school system asks me what I think about the Middle School, I start off with my statement about organization, and then I ask them what's the matter with their junior high school? Why are they so ready now to discard it? Here I get some response. What I get worries me a little because the answer I hear form superintendents, the curriculum directors, from the other officials, is that the junior high school has missed the boat; that it started out to minister to teen-agers on the basis that they were unique, and perhaps they aren't unique. I don't think that's the answer at all. I want to say right here that I think as much educational qualtiy can be realized in the junior high school as in the Middle School. I want to put that right on the line here, and that's what I believe. To the extent that the junior high school has failed, it's simply been that it has tried to project the image of the high school one step lower and to lift all the trappings of the high school, all the pressures for the academic, all the department chairmen, all the football, all the dances, and has refused to be unique in its own corner as it might well be. On the other hand, the state has some marvelous junior high schools, where there are excellent top flight programs going on.

Then I asked, what's your position on departmentalization of the elementary school? He said that he thought we should have departmentalization in the Middle School. What's the matter with departmentalization? Well I don't want to argue that there is anything the matter with it. I think that if someone believes in it with all his heart it can be made to work, but the matter with it from where I sit is that it fragments learning. We've gotten the idea that education is housed in mastery of the specialties. We got the idea that that's where education resides.

We tend, we educators, to give education too narrow a definition. If we are specialists in the social studies, and if we're specialists in math we're arguing that education is the full mastery of math, and if we're specialists in science we argue that education is the full mastery of science. We seem to forget that education has even broader purposes than the mastery of all these things. There has been for a long time this battle over departmentalization. We forget that the magic is between the teacher and the pupil, and we spend time and energy arguing about the sophisticated organizations and the sophisticated specializations, not realizing that the real paydirt lies between the pupil and the teacher.

When the fellow says, "Well, if I set up Middle School I can justify the pupil personnel services at the lower level," I say, "Why can't you justify them now?" He says they're too expensive and here I get lost and frustrated. He can't justify them now because they're too expensive, but if he just shuffles the cards again and puts grades 5, 6, 7, and 8 in the middle school, taking 5 and 6 from the elementary school, he can justify the pupil personnel services. Now, I want to argue, and I would be delighted to do so in this discussion period, that you can manage this very well in an adequately sized elementary school. You can justify all the pupil personnel services, and I think they ought to be there. I think they should have been there long since, and I don't think you need to reshuffle the cards to justify them.

So we seem to be headed for another binge, and I don't want to pretend that I can do anything to prevent it. I think that healthy experimentation is in order. I had a big argument with a principal at one time when I was superintendent of a city of 60,000. He was a very strong person; I had an argument with him about the way he organized his school. I presented all my logic. He listened patiently and when I finished, he said, "Well I don't want to deny anything you said but if I believe in it, this is a strong way to make it succeed" and I said, "Brother you have sold me. You believe in it, you go on and do it," and he did. So what I'm trying to say here is that I focused, in my discussions on the telephone, of which there are many and increasing, "Why do you want to make this change? Why do you want to go to the Middle School? Is it because you want to try something new? Do you have sound educational reasons for moving over to the Middle School and if so what are they? Let's hear them!"

If you put grades 5, 6, 7 and 8 in a Middle School moving grade 9 over to the senior high school, there is some advantage, in communities where children transfer out of the parochial schools into ninth grade, then in the next year have to transfer again to the high school. It cuts out one adjustment, and I think that is an advantage. I am not sure I want to throw the baby out with the bath water, and make the move simply because it will accommodate this small enrollment. Of course, we could get around it by making the junior high school 6, 7, and 8, and I don't think that would violate any of the Ten Commandments if it were done.

One of the great foci of the argument of the Middle School appears to be that you could apply more specialists, get more focus on the academic, and thus advance quality education. My mind goes back to Arthur Jersild; about 1940 he summarized some retention studies that had been made by some of his colleagues. If my memory serves me correctly he took a Botany group in a college that was taught by an effective teacher. He took this examination the Botany class had taken, and applied it to the same class one year later without warning and discovered that 76% of all factual information had disappeared. Then he took the same group and found that 84% of the factual information was gone another year later. I wonder if at this late stage, 23 centuries after Plato, we have to stop and remind ourselves that education is vastly more than academic. Do I think academics are essential? Of course I do because I think they are the means to the end that the child orients himself to the world and all that's in it, but to make it the end product seems to be little short of ridiculous. Do you remember the NEA Commission in 1918? Taking a lock from orbit down to the education scene, there are seven cardinal purposes of a school:

1. to teach an individual some sound, moral and spiritual values,
2. to make him a working member of the family,
3. to make it possible for him to be economically independent,
4. to teach him the fundamental processes, (I'm not trying to put these terms in priority order,)
5. to prepare him for intelligent use of his leisure time,
6. to make him independently responsible for his health,
7. to make him an effective citizen.

It seems to me that if we get our focus too sharply on the academic, we're going to forget to look at the broader picture and end up with the same tunnel vision. I think the trend in curriculum development will be toward integration of curriculum rather than towards further fragmentation. I can remember my undergraduate days in college when I took the math and the science and the foreign languages, and all the history. In my senior year at college I began to see that there were fundamental relationships among all these things, that the truth was interrelated; the truth had some relationship to the world in which I lived. I'm sorry to say that those fine college professors that taught me so many years ago did not teach me to see this. I had to arrive at it myself. All I'm saying is that I think the school must relate knowledge to life.

So I think the Middle School has sprung from the mind of the college professor, who is an academic specialist and who believes that education is encased in the mastery of his specialty, the defeatist about the junior high school, plus the proponents of elementary school departmentalization, plus possibly the person who sees an opportunity to start a new building.

The cost of education in New York State, and indeed in the nation is multiplying very rapidly. I remember when Commissioner Allen used to say that it would double every seven years, but the seven year period has shortened and is now closer to six. What I want to say to you educational strategists and leaders is that we're about to the point where our taxpayers are going to impose on us a new responsibility called cost efficiency. You haven't seen it yet on the landscape, but you're going to see it very soon. They're going to begin to look at everything we do, and they're going to try to relate it to what we say the purpose of the school is, and then they're going to ask, is it worth it? Now don't let anybody fool you that the Middle School isn't more expensive than the organization we have now; it certainly is. The proponents argue for services that would make it so, and so I think we have to look forward to the time that we're going to determine to try the Middle School. It will be weighed in the balance of cost efficiency and compared with the results of our present organization. This is a fair comparison, and I would want to know whether in your judgement the Middle School would win in the cost efficiency race.

Now I think it is about time I drew a conclusion, and my conclusion is going to be very simple and very direct, and it is this: I don't, from where I sit, see any valid purpose of education that can be better served by the Middle School than by our present organization. I'd like to repeat that because I'm sure I will have to defend it. I do not see any valid purpose of education, anything I recognize as valid, that cannot be served just as well in the present organization as it can in the Middle School. If you want more services, then I think we need to answer, "Why can't they be applied in the present organization?" Perhaps the junior high school can be made over, deleting the excess baggage of the high school. Perhaps the elementary school can secure better teachers, personnel services, and libraries. Do you realize that 40% of the elementary schools in New York State do not have organized libraries? Possibly the senior high school can become truly comprehensive removing their three major defects. (Parenthetically I should remind you that more than 1/2 of the senior high schools in New York State have senior classes of less than 100.) The defects I spoke about are very easily arrived at: first, they do not offer enough formal opportunities for the most able children; they do not have the advanced math, the advanced science, the advanced placement, etc. at these small high schools. At the other end of the scale, they don't offer children an opportunity to learn salable skills. Perhaps more important than both of these defects is the trouble in the middle, that great middle group, who ought to have some alternatives to the classical program, who ought to have a practical curriculum. These small high schools have no such alternatives. I would not want to charge the small high school with contributing significantly to drop-outs.

Are we falling into the well-known trap of deleting something effective because it doesn't deliver magic, of searching for a pot of gold instead of doing the hard things that will make the present machine work? When you think of the common school, you are led back to the basic purposes for which schools were established in the first place, and I think you need to subject any proposal for a radical change in organization to an examination of whether the new proposal will better serve the purposes for which the common school was established. That is where it lies. It lies in the unexplored, unknown, the area we refuse to research, the last three feet between the teacher and the pupil.

DONALD O. BENEDICT

The program as it is outlined in New York State does not mandate any particular kind of organization. However, we do have a long list of legislative mandates which require that certain subjects be taught and we do have Regulations of the Commissioner of Education which require that there be certain program elements in the various grades. In grades 7, 8 and 9 (and it doesn't make any difference whether this is a registered junior high school or whether it is part of a 7-12 organization), the Commissioner's Regulations require that there be taught the mandated subjects, English, science and social studies, on what amounts to a daily basis. Also required is instruction in science and instruction in art (I think the regulations call it drawing) and music, and instruction in physical education. Practice usually indicates that the mandated subjects, English, math and social studies, be offered on a regular daily or near daily basis.

Usual practice is for science to be offered on possibly a half-yearly basis in grades 7 and 8. Physical education should be offered on a regular basis with the art and music regularly scheduled either on a term basis, or an alternating daily basis, or some other acceptable basis. In the evaluation of the total program, you will find a balance between the mandated subjects and the art, music and physical education. Practical arts such as industrial arts and home economics are also elements of the program and they're supposed to be related parts of the balance. Now as far as regulations are concerned, those are the requirements. How you organize your school district to do these things is generally a matter which is left to the local board of education and local administration.

In regard to this middle school proposition - I was looking around in my desk a couple of days ago and I came upon some remarks (I won't dignify them by calling them a speech) I made at the dedication of a new building in a nearby school district about twelve years ago. Refreshing my memory, I found that I said two things: First, schools and school districts exist for just one purpose, to serve children, that was the nub of the whole proposition. Secondly, school buildings in any case are only tools, and they are never ends in themselves.

One thing that we hear from the practical point of view in the development of the middle school is how are these youngsters going to be housed? It seems to me that with distressing frequency we find the main justification for middle school is the fact that you have to build something, and the question is for what? I certainly hope that middle schools, as they develop, do not leave these youngsters in indeterminate grades, whatever they may be - 5, 6, 7, 8 and 9 or some combination, in some kind of an educational no-man's-land. I know that in some districts the program may be dominated by the high school philosophy. On the other hand, a well defined elementary philosophy may take care of the primary needs of the elementary school, and we may have a group here in the middle who are the victims of circumstance, either a zone of pressures or conflicting philosophies at either end of the scale, so that we may have, in the middle school, different groups at different times depending on what building gets full first, or where they want to build, or what to do next. I think we should, at all cost, avoid these mechanical solutions which we have a tendency to go for in the development of these programs.

I heard an expression last night which may be pertinent. I belong to the Columbia Record Club Masterworks subscription service, and those of you who are familiar with it know that every three months they send you a so-called audition record that has about fifteen or twenty excerpts of classical or semi-classical records recently released, with a little description. The idea, of course, is to sell records, but it also is an easy short course in Beethoven or something else, and this one happened to deal in part with Beethoven's string quartets, mentioned the way Beethoven wrote them and the way they were to be played, and he referred to them as "exercises in inspirational frustration." I think people who have dealt with a junior high school probably have felt that same way - adolescents are exercises in inspirational frustration. Anyone who has ever taught ninth graders knows that there are certain days they should be consigned to hell, and other days they conversely belong with the angels.

We need to keep in mind that what happens to children is important, and that what develops in a school is going to be primarily the outcome of the philosophy and the energy of the administration and the staff. I don't know that there is any good substitute for educational leadership in terms of what happens in any kind of school situation. One thing that Dr. Crewson touched on, and I think it needs to be emphasized, is in New York State we may not have any large number of districts as yet involved in middle schools. We have currently about 500 districts which enroll fewer than 2,000 pupils and we have on the other end of the scale about 110 which enroll more than 5,000. The last group may be the area where the middle school may get some attention. The practical problems of middle school operation are not going to be general like a midwinter snow. What over half of our districts need obviously is not middle school, or junior high school, or something else. They need school district reorganization, and they need it badly in order to get enough pupils and enough wealth together in one school district so they can do these things that need to be done for all pupils in all grades, kindergarten through 12.

There are certain practical problems that you have to face if you are going to change the type of organization which you now have. You have to start where you are. There isn't any process by which there can be a tremendous flash of lightning and cloud of smoke, and from this will emerge some new type of administrative arrangement which is going to solve all our problems. We are in a system of education in New York State, as elsewhere, which is evolutionary. We are today what we became since yesterday, and we will be tomorrow what we progress from today. Whatever changes we bring about in our type of organization, we are going to be based on where we are and where we decide we want to go. We also have to keep in mind that whatever changes we bring about are going to be brought about by people. They're not going to be brought about by district lines. They aren't going to be brought about by buildings, and they aren't going to be brought about by television. They're going to be brought about by people, and there isn't any substitute for good hard work and competent administrative leadership to bring about change.

Two chaps, Davison and Renner, very recently wrote an article which dealt with effective administration. I think that there are elements in the little guidelines that they set up to measure the effects of administration that apply to this particular area very correctly. First, effective administration must create circumstances in which staff members have a feeling of individual responsibility. Second, effective administration requires awareness of the views of all the clientele involved in school affairs. Sometimes the custodian's ideas are just as important as the staff members. Third, effective administration encourages and protects the individual welfare of every learner. This is almost axiomatic in all educational administration. I think in all education structures we have a tendency to lose sight of it. Fourth, effective administration must be thorough, rational and consistent. Fifth, effective educational administration requires leaders with principles who demonstrate initiative, but who avoid expediency. That one I would put first because I think we need to make very distinct differentiations here with regard to our changes in structure. Are we doing this because we're being pushed into it, or is it the thing to do because of certain circumstances with which we are now faced, or is it the thing we ought to do in order to best educate the children and to insure that our whole school program will progress?

ANTHONY E. TERINO

The junior high school has come under severe criticism. Indeed, over the years I have been one of its most consistent critics. And yet, if we review the reasons for establishing the junior high school, we find that it has fulfilled all of its original goals. In the 1920's many high schools became overcrowded. The junior high school provided relief by taking the ninth grade. There was a demand for "more practical courses"for non-college-going pupils. The junior high school provided them. Then there was the demand that pupils be retained in school longer, for the drop out rate was largest in grades 6 through 9. Certainly, the junior high school has alleviated that problem.

And yet, the junior high school is bound to be the "whipping boy". The name "junior high school" is in itself unfortunate. I only wish that some bright young person had called it the "middle school," for the title "junior high school" is like a red flag. Talk to a senior high school faculty about articulation with the junior high school, and you will frequently hear complaints that the pupils coming in from the junior high schools are poorly prepared. Let's face it, the articulation in some districts is inexcusably bad. For example, in one district the pupils studied a foreign language all through junior high school. When they entered the senior high school, the teachers found them entirely unready for the third-year foreign language course, which culminates in the Regents examination. The superintendent called in a consultant to decide what to do. Obviously, the one thing that should have been done, was to bring together the junior and senior high school principals and foreign language staff and have them develop acceptable instructional standards and procedures for each achievement level. Instead, the consultant was expected to do so. In the meantime, the administration decided that the third year foreign language students should not take the Regents examination until the situation had been corrected. There are many similar instances of poor articulation. The question is: Should the junior high school be abandoned simply because there are problems which need correction? Do not the high schools, elementary schools and middle schools face equally serious problems?

When a superintendent told me that his community wants the middle school, I asked him why. "Without the ninth grade," he replied, "there will no longer be the pressure for Carnegie Units." I looked at him in amazement and said, "But in answer to community pressure, you are already giving Carnegie Units in grades seven and eight. Are you going to discontinue this practice?

Has the name "junior high school" engendered this quest for Carnegie Units? To some extent. More likely, the fault lies with poor leadership or parental insistence, which in effect is the same thing.

The rapid establishment of junior high schools in very large cities has done much to hurt the junior high school, and yet at the same time it has provided some of its greatest achievements. In some sections of the very large cities, junior high schools of 1700 to 2000 pupils are too big, under their present organization, to provide boys and girls with the close faculty-student contacts they need. In many junior high schools, successful teacher recruitment has not been achieved, adequate supervisory techniques have not been worked out, and effective articulation has not been established. But these are problems that apply to other institutions, including the middle schools.

The most ardent proponent of the middle school seems to be the Educational Facilities Laboratory, which is entirely supported by the Ford Foundation. Although the brochure on the middle school is an attractively printed document, it fails to provide any rationale for selecting the middle school in preference to the junior high school. Instead, it states the following:

> "It is unrealistic to suppose that the middle school will, or even should, replace the junior high school everywhere. A combination of factors determine school organization within any given community from demography to economics to law, to politics, to real estate. There is no intention of suggestion that the middle school

> is the only route for better education. The value of the new pattern may be in helping to solve problems that are primarily social or economic or administrative, rather than purely educational. The big cities trying to cope with the crisis of de-facto segregation, intransigent white groups and deficient budget see more than a glimmer of hope in the 4-4-4 or 5-3-4 grade organization.

In effect, the Educational Facilities Laboratory is championing the middle school, not as an educational ideal, but as a compromise arrangement, especially in big cities, for dealing with problems that affect the schools. One weakness of the brochure is that it does not make clear how the middle school is going to resolve the "crisis of de-facto segregation, intransigent white groups and deficient budgets." Nor does it even hint that the middle school organization may accentuate the problems of recruitment, supervision, and administration, let alone the age-old cleavage between grades 8 and 9.

But it is not my intent to decry the middle school. I am simply asking that justice be given to the junior high school. Actually, the school organization in any given community depends on a host of factors, and in any given situation it may be an absolute necessity to establish a middle school or some similar organization, because of housing and other circumstances. I am suggesting therefore that educators of experience and competence will be very careful before deciding that, in general, the middle school is superior to the junior high school as an educational idea.

The recent brochure entitled Imperatives in Education issued by the American Association of School Administrators describes very briefly many of the changes that have taken place in American life: the advances in technology and communication, the confusion of the population in the presence of these changes, and the insecurity that stems from world ideological conflicts. One memorable passage from this report is as follows: "The most stupendous of man's inventions are not the wheel, or the wedge, or the weaver, but the values by which he has lived. In the future, as in the past, what becomes of him will depend less on what machines he invents, or what governments are imposed on him, than on the values he creates."

These values are distilled from human experience and they comprise the feelings, beliefs and commitments that human beings live by. Values are partly evolved through knowledge, environmental circumstances, and the relationship of people with people. Institutions help to develop values. Indeed, there is good reason for contending that active participation in the school community, with a variety of opportunities in art, music, literature and other interest areas will have a greater influence upon the pupils' judgments, ideals and goals than a narrow concentration on the study of academic subjects.

Actually the junior high school has not been losing ground, but rather gaining ground. Each year a dozen or more new junior high schools have opened in New York State. On the other hand, except for recent developments in New York City, the number of middle schools, is slightly more than sixty for the 1966-67 school year. In a study that we conducted five years ago, we found that there were 1207 public schools with seventh and eighth grade classes. Thirty-eight per cent of the seventh and eighth grade classes were in the six-year high school, the 6-6 type of organization. Twenty-four per cent were in the three-year junior high school, grades 7 through 9. In other words, 62 per cent of the youngsters were in a situation where grade 9 was housed in the same building with grades 7 and 8.

Placing the ninth grade in the senior high school is not by any means the ideal arrangement that middle school proponents would claim that it is. These pupils are removed from the smaller school and the faculty they have known through two years of adolescence and are placed in a new and larger setting for what is a critical, transition year of their school career. In these instances, the educational experience in the ninth grade often tends to become depersonalized just when the pupils need the warmest understanding from faculties and school administrators. This is what bothers me about the middle school champions--in the fact that they are so ready to take the ninth grade and put it back into the senior high school, where it again will come under the domination of the teachers of grades ten, eleven and twelve. This in itself may not be a detriment, provided sufficient recognition is given to the fact that ninth grade pupils are younger and need varied experiences in school, rather than exclusive concentration on preparing for college. The college admission fever, with emphasis on the accumulation of Carnegie credits, has already afflicted many junior high schools. If the present trend continues, it will soon reach the middle grades of the elementary school.

INTRODUCTION TO THE PANEL

DR. WARD EDINGER, CHAIRMAN

(PANEL MEMBERS: R.L. LORETTE, JACK ETHER AND A.J. CALI)

Others, in addition to members of the State Education Department, have had extensive opportunity to observe educational changes which have been so frequent in the last few years. Among these observers are the college professors who are able to gaze dispassionately for the most part at various innovations occurring in the state and nation. Members of the Educational Administration, and Curriculum and Instruction Departments in the State University of New York at Albany have been watching the shift, in some school districts, to the Middle School with great interest. Their views as to the educational implications of this organizational change would seem to be most important to these people instituting the innovation.

Dr. Ward Edinger, head of the Department of Educational Administration, serves as chairman of the panel composed of Dr. Robert Lorette, specialist in Funds and Facilities; Dr. John Ether, specialist in Elementary Education, and Dr. Alfred Cali, specialist in School Personnel. These gentlemen are conversant with the educational changes inherent in the shift from junior high school to Middle School and their opinions should prove extremely intriguing and valuable to educators of early adolescents.

ADMINISTRATIVE IMPLICATIONS OF THE MIDDLE SCHOOL

WARD EDINGER

As we reach the mid-session of this conference, I have been impressed that:

1. the speakers have presented evidence and ideas rather than conclusions,
2. you have been cautioned against band-wagon practices and advised to study the middle school carefully as it pertains to your situation,
3. you have been urged to think of the middle school, not just as a structure, but in relation to possibilities it provides for experimentation and innovation.

You have been given a great deal to think about.

Before I introduce the members of this panel, I wish to share a frustration with you. As a school administrator, I have subscribed to the evolutionary process of developing new practices, with pilot studies under way at all times, and with careful consideration of all steps and thoughtful evaluations before adoption of new practices. As I have heard about the rapid changes in technological development and of the rapidly increasing numbers of people in the world, I have become concerned that we are moving much too slowly in development of new practices.

Therefore, I would like to take a few minutes to present a few of these alarming statistics that should have a great effect on our school curricula and methodology.

Consider, if you will, the effect of the following information about population growth in the world.

It took up to the year 1850 to produce the first billion people in the world, the next billion were produced in the next 75 years, by 1924. It was 1960 when we had the third billion. Just recently, it has been estimated that in 1975 there will be four billion and ten years later, five billion. It is thought that by the year 2,000, there are going to be nearly seven and a half billion people in the world. Possibly, it is difficult for us to conceive of such astronomical numbers, but if we realize that seven and a half billion people are more than twice as many as are on earth now, we can realize that our world population is going to be doubled in the next 34 years, if the predictions are accurate. This gives us some sense of the rapidity of increase. When you think of equipping the world for a new population equal to the present one, in one third of a century, the implications for all of us go far beyond "doing business as usual."

It is rather interesting when comparing numbers, to realize that the population of India, for example, is increasing one million persons each week. So the increase in the population of India between when you come in here on Sunday, and when you go home on Friday will be something over seven hundred thousand people. Egypt now has thirty million people living in a space about the size of Massachusetts. Egypt is larger in area than this, but most of it is uninhabitable. It is predicted that the population will be sixty million by 1988. There are many other equally startling data relative to population increase. Some steps have been taken to control population increase, one being a birth controll pill. The pill is making a difference, particularly in the United States, but the world figure does not reflect decrease in the rate of increase.

It is said that in the year 2,000, half of the population of the United States will be living in 12 states . It is predicted that only 10% of our population will live in the twenty states that constitute one half of our land area. It is said that about 5 out of 6, in the year 2,000, will live in cities which will occupy only 2% of the land, excluding Alaska. There will be, we are told, six big cities: from Portland, Maine to Richmond, Virginia; from Milwaukee to Gary; from Detroit to Pittsburgh, one in northern California, one in southern California, and one on the east coast of Florida. These will constitute the vast majority of the population. Results of present experiments with rats that are crowded together in congested areas cause serious questions of how we will handle some of the human problems caused by congestion.

I will quote just one of many references to the vast rate of acquisition of new knowledge. Thomas Bailey, Superintendent of Public Instruction in Florida has summarized it as follows:

> "Suppose we say that mankind has had 50,000 years of recorded history. In order to bring this into a comprehensible span of time, let's compress this 50,000 years into 50 years, which represents the life span of many of us here. If we accept this time scale, then you stopped being a cave man ten years ago; five years ago pictorial writing was invented; two years ago Christianity was born; fifteen months ago we had the first printing press; ten days ago electricity was used for the first time. Yesterday the airplane flew for the first time in the morning and the radio was invented last night; television came into being this afternoon and the jet airplane was invented since I started talking."

He did not mention computers which we think will make a greater change in our civilization than many of these things. Add to these changes all the present concerns of man adjusting to his physical environment and to his fellow man, and one gets a feeling of some urgency.

Some people have been working diligently for a number of years in an effort to bring about more rapid changes in education. Lloyd Trump said last year, "I do not have the space here to develop a personally favorite and important thesis, it is that most of the changes suggested earlier in the century...these are...the activity movement, a variety of content revisions, educational radio, many audio-visual aids, work experience, core or common learning, increased attention to individual differences among learners, citizenship education and many others,... never really got into the fabric of American schools because of the way education was organized and the manner in which teachers taught. The proposals could not pierce effectively the barriers presented by such concepts as the following, none of which is supported substantially by educational research. There are several. I will mention only five of them:

1. the optimum class size for all pupils 25 to 30, with a PTR of 1 to 27;
2. one teacher alone is responsible for the classroom instruction in a subject or grade;
3. a subject is best learned if a student is in a room 200 minutes a week;
4. the best ways for students to learn is by reading and listening to the physically present voices of the teachers and classmates in a self-sufficient classroom;
5. a seven period day is superior to a six period day or vice-versa."

In my opinion, these changes, all representing a radical increase in the rate of change, present us with the dilemma of making rapid changes in our schools or seeing them cease to be a viable instrument of our culture.

MIDDLE SCHOOL - FINANCIAL ASPECTS

ROBERT L. LORETTE

A survey of the literature on the Middle School indicates that we are strong in theory (what we think ought to be) and weak in science (what we know for sure). Thus, in the absence of adequate research, the Middle School movement must currently be predicted on the basis of "intuitive" judgment. Bhola describes this situation precisely.

> "It is often demanded that educational innovators prove conclusively that their innovation is better than the program already in use. This is not always a reasonable demand. We have not done the research necessary to invent all educational solutions. At least in some areas of education we will, for a long time, be inventing solutions on the basis of insufficient data. But inventive solutions promising high probability of success are better than the status quo that is patently inadequate. Reasonable risks and attractive hypotheses are an essential part of life, of social engineering, and of educational change."1

The implied right to exercise intuitive judgment regarding the Middle School Movement carries with it the responsibility to evaluate the seventy years of literature and experience related to the Junior High School movement. As Leese points out:

> "The junior high school educator who built his case around the need for insightful guidance of youth's feelings, attitudes, and values surely must be more than slightly alarmed about the proposal to abandon its goals and to be more than casually concerned about present invitations to make these goals either interdeterminate or appreciably different. Over many years the junior high school has struggled to organize for the guided transition of pronouncedly dependent children into decidedly more independent youth, during the early

> teen years. In the period since 1910, many have not understood the full meaning of that purpose and a few here and there have rejected it. But it can be said with some confidence that the junior high school specialist has treasured the personal growth and development objective whether he achieved it or not."2

Forty years ago, Koss identified several factors responsible for educational reorganization (The Junior High School) that sound very similar to factors now cited in relation to the Middle School. They were:

1. Waste of time in our system
2. High drop out rate
3. Currently poor job of articulation to next unit or to job orientation.
4. Current rapid approach to adulthood makes many features of current school organization unsuitable to task assigned.
5. Local building problem
6. Desire by school authorities to be "in" with the fad.3

McClurkin4 speaks of a thirty year cycle of change. In this way, he says, we tend to come full circle in our social invention to "reinvert," at a slightly advanced stage, the patterns needed to carry forward our social enterprises. It is very probably that the Middle School is just a "reinvention" - an attempt to reorganize the educational enterprise to better meet current needs.

It has often been claimed that a disproportional amount of time and attention has been paid in the past to school business and financial matters. However, as a result of this experience, there now exists a rather well-established procedure for implementing any given educational plan. The following is an attempt to show how the procedure would apply to the development of a Middle School." In interest of brevity it is present in outline form.

1. Developing a philosophical basis for financing the Middle School as an integral

part of the total school system.

Example: (From E.F.L. - "Middle School")5

"'Middle School"...designates a school in between elementary and high school, housed separately and, ideally, in a building freshly designed for its purpose, and covering at least three of the middle school years, beginning with grade 5 or 6. Most middle schools presume, in ultimate plan if not in present reality, the four-year high school beyond. Through its physical layout and instructional program, the middle school tries to take better account than the conventional junior high of the needs and abilities of between-age youngsters and to use -- or at least anticipate -- a variety of instructional innovations and groupings. The imaginative disposition of space, keyed to an unknown educational future, marks the best of the schools. If the middle school year is kept unfrozen, in program as well as physical design, it can serve as a true expansion link in the school system, adding or subtracting grades to meet the changing enrollment pressures."

Example: (East Irondequoit Central School Bulletin - "Within Our Schools")6

"The middle school has been described as '....a school for early adolescents...' '...an institution that would truly serve the young adolescent in contemporary society will be neither elementary nor secondary in basic character. It will combine the elementary school's traditional concern for the whole child with the secondary school's stress on scholarship and intellectual development.'"

"The middle school in our district will provide an educational program for the 6th, 7th, and 8th graders. The 6th graders will generally be grouped together and will have a program which will be very similar in nature to the one that currently exists for the 6th graders in our elementary schools. The 7th grade will be semi-departmentalized, and the 8th grade more fully departmentalized. This will provide a smooth transition from the elementary through the middle school and into the senior high school."

II. Understanding the sequence for implementation of the Middle School.

A. Order of action
   1. Educational plan
   2. Expenditure plan
   3. Income plan
   4. Priority plan

B. Integral Relationship

III. Establishing the educational plan for the Middle School.

A. Identification of consensus items.

Example:
   1. Educating the group between early school age and full adolescence is a special problem.
   2. Girls mature faster than boys.
   3. Different people mature at different rates.
   4. Adolescence is a by-product of western civilization.
   5. Something different from current programs is needed.

B. Identification of items on which consensus is lacking.

Example:
   1. Age group to be served.
   2. Needed program, services, facilities.

C. Adoption of a specific Middle School program.

Example:
1. Statement of philosophy and goals.
2. Outline of curriculum.
3. Description of facilities needed.
4. Plan for flexibility and adaptability of program and plant.
5. Criteria for measuring success.
6. Alternative proposals for total program or parts of programs.

IV. Developing the cost plan for the Middle School.

Example:
1. Project cost and cost analysis of proposed plan.
2. Project cost and cost analysis of alternate plans.
3. Project cost of facilities.
4. Project cost of operations of plan and alternatives.

V. Determing the income plan for the Middle School.

Example:
1. Determine sources of funds.
2. Study conditions for obtaining federal aid. (Innovation/ Economic Status)
3. Study conditions for obtaining State aid.
    - a. Weighting 1.25 ADA Grades 7-12 in New York State
    - b. Weighting 1.00 ADA Grades 5-6 in New York State
    - c. No anticipated change in aid formula in New York State
    - d. No special building aid in New York State
    - e. Some money for innovation research may be available.
4. Evaluate wealth base and cur-

rent tax effort of the local district.

VI. Adopting the priority plan for the Middle School.
Example:
1. Determine short term or immediate commitments.
2. Determine long range choices.
3. Establish sequences for implementation of long term choices.

* * * * *

All of the above is intended to emphasize one major point. WHAT WE KNOW ABOUT FUNDS AND FACILITIES MANAGEMENTS CAN BE FULLY UTILIZED ONLY WHEN WE ARE IMPLEMENTING A SPECIFIC MIDDLE SCHOOL PLAN IN A SPECIFIC LEGAL SCHOOL DISTRICT.

This leads to four observations regarding the Middle School "movement."

1. There is need for greater local specificity in planning.

2. There is need for recognition that economy is a fundamental aspect of efficiency.

3. There is need for a blending of "theory" and "science" in considering educational change.
4. Just maybe, the funds and facilities manager is the linker between researcher and educator.

FOOTNOTES

[1] Bhola, Harbans Singh, "The Need for Planned Change -- in Education." Theory Into Practice, Volume V, Number 1, February 1966, p. 10.

[2] Leese, Joseph, "Introduction." Capital Area School Board Institute, The Junior High School and the Adolescent, November 1962, p. 4.

[3] Koos, Leonard V., Junior High School. Boston, Ginn and Co. 1927, p. 1.

[4] McGlurkin, W. D., School Building Planning. New York, Macmillan Co. 1964, p. 117

[5] Murphy, Judith, Middle Schools. New York, Educational Facilities Laboratories, 1965, p. 6.

[6] Extract from "Let's Move Forward," Within Our Schools, Volume Xl, Number 5, November 1966.

THE ELEMENTARY ADMINISTRATOR'S VIEW

JACK ETHER

Following the development of the Middle School in the United States, I get a feeling similar to the one I get when I get home at night and my 15-year old comes out with a king-sized Maltese Cross hanging around her neck. I believe it is called a Surfer's Cross this year. The feeling is the same one I got when I watched her do the frug last year. I almost wonder if the Middle School and the service cross and the frug don't have a great deal in common. One almost wonders if each doesn't have the same potential and rest upon the same amount of substance. However, if nothing else, I think that the educational saw about 25 years for a concept to move from Genesis to operational adoption has once again been proved in error by the rather fast moving activities in the area of middle school.

This is a significant point to those of us who are concerned with the elementary school. Concepts such as individualization of instruction, and program adoption for particular kinds of students have taken 25 years or more to move from Genesis to operational adoption. We still do not have school systems that really, in all of its implications, in all of its operations, has individualized instruction. On the other hand, the ungraded primary and the middle school have taken almost no time to move from Genesis to adoption. One must wonder what the difference is. Why do we conceptualize individualization of instruction and see so little application after 25 years? Why do we see the middle school sweeping through the country? If one looks at these kinds of ideas, the individualization of instruction as one type of educational innovation and the middle school as another, I think it is pretty clear that the former falls in the domain of the teacher, teaching activities, and the latter falls in the domain of the administrator. So it seems to me that those things that are afministrative seem to get adopted much more rapidly than those things that are fundamentally in the domain of the teacher. Now this may mean of course, that the administrator is more flexible than the teacher is. It may seem that the power is in the hands of the administrator rather than the teacher. I suspect that it really means that we can shed our administrative overcoats much faster than we can shed our teaching underwear.

I think we must be very clear that these two are vitally different sorts of things, and it is this difference that I find disturbing. Let me put it this way. As an elementary administrator looking at the Middle School, I must ask this fundamental question. "What are we really trying to do?" Are we worried about grading arrangements, staffing, funding? This is what the literature tends to cover. I have seen very little or read little that deals with the program of the middle school. I have found practically nothing that attempts to put a theoretical base for the curriculum in the middle school.

Youngsters seem to be maturing earlier, but the psychologists, as I read them, are not saying that this is a sound reason for reassignments of 11-year olds and 12-year olds. The 12 year old may be more like a 13-year old than he is like an 11-year old, and the 15-year old more like a 16-year old than he is like a 14-year old, but I don't find the sociologist and the social psychologists saying, with any loud voice, that this is a sound reason for reassignment. So the question I have to ask continually about the middle school is, "Is this another administrative device? Is the purpose of the middle school to make us feel better? What does it do for the children?"

As I look at the history of the junior high school, the six year high school, the comprehensive high school, the school within a school, I find that I have to reject administrative arrangements alone. Now I want to say this again, I must reject administrative arrangements alone. The program of instruction for what the administrative arrangement is designed seemd to be the crucial factor. As an elementary administrator, I ask "What skills, what attitudes, what abilities, will the students entering the middle school be expected to have? Will they really be permitted to think, to explore, to discover? What will be the role of clubs, and dances, and sports, and cars and dates, and bookcovers, and libraries and all of these kinds of things?"

Until the elementary administrator has answers to these and similar questions, he cannot adequately look at his own house. The elementary school is expected to provide experiences for children that are immediately appropriate to the age and learning of the child and at the same time part of the total developmental scheme of education. If the elementary school administrator is not sure of the purpose and the program of the next educational unit, he cannot evaluate his own school. The business of looking at one's own house, and I think this is what I am really being asked to do, leads obviously to my next concern.

I think that the academic and attitudinal schism between the elementary schools and the secondary schools in this country is recognized by most educators. Attempts at articulation between these units have been made many times, but again, within my experiences and as I read the literature, articulation attempts are generally physical attempts. The elementary school child, the 6th grader, the 12 year old, is brought to the junior high school for a day or so to introduce him to the facility, to the plant, to the counselors, to let him follow the class around, learn how much fun it is to be in a junior high school, learn how to accomodate to the bell schedule, and then is returned for another two weeks of living in the elementary school.

This procedure reminds me of the attempts the Peace Corps make to avoid cultural shock on the part of their trainees; the corpsman is acclimated to the unusual before he faces it on the site.

I think that with the advent of the middle school we have an opportunity to really take a full step, in the direction of providing adequate experiences for children, a step we have talked about a great deal.

We in elementary schools are still concerned with the twelve-year old. Since the middle school administrator is beginning to be concerned with the twelve-year old, let's both take a look at him. Because the middle school administrator will continue to be concerned with the fifteen-year old, let him join the high school administrator who will begin to be concerned with the fifteen year old. Let them jointly take a look at the 15 year old. Perhaps this is a long way of saying that we should take a real look at articulation. Let's really begin to think on a K-12 basis in every aspect. We have talked about mathematics programs in K-12 dimension. We've discussed art and English and science and all the other disciplines. Now we should consider the various demands that will be made on children, the program, the facilities, staffing, reporting on a continuing basis, and many other things. Let's use the opportunity of developing Middle School to get an organized, articulated K-12 overview for all aspects of education.

Now don't misinterpret what I am saying about a K-12 view. This doesn't mean, and I think I should make this as clear as I can, that the elementary school administrator feels so secure in his own operation that he will spend the rest of his time keeping a hard eye on the Middle School and the Middle School Administrator to see "what you are doing with my child." That just can't be! If I interpret the Middle School correctly, and the forces that are generating the Middle School, then it is clear that as secondary education begins to absorb a younger age group, so we in elementary education can look forward to a new younger age group.

The pre-kindergarten, the nursery, the four year old, and possibly the three year old, will soon be a part of the in-school population. The elementary administrator will be looking at this totally new group of children, and we don't know very much about 3's and 4's. We have some leads from our nursery school people, but basically we don't know how to handle them in a total school setting. We don't know what type of programs to develop for them. We have our own problems. We will be taking a hard look at a new age group too, just as you will be taking a look at a new age group.

This is one other intriguing aspect of the development of the Middle School from the elementary administrator's point of view. The major support, it seems to me, of the Middle School comes from the evidence indicating earlier maturation. This evidence fundamentally refers to social maturation, rather than physical or emotional maturation. It is pertinent, then, to ask what has caused that social maturation. If indeed the 12 year old has developed the social skills and desires formerly thought appropriate for the 13 and 14 year old, what has made the difference?

Put this another way. How much effect has the elementary school had on the earlier social maturation of the youngsters we are talking about? Is there a casual relationship between being in an elementary school for 6 or 7 years and the "earlier" maturation? I think if we took a quick poll here, we'd range from "some" to "considerable", but I think we would agree that there has been at least some effect.

Now let's look at this from the viewpoint of the ecologist. He will tell us that environment includes the form of life inhabiting that particular portion of the earth's surface. We know, the ecologist says, further that if any shift occurs in an environment, we can anticipate a shift in all sectors and that environment, or at least a shift in all functioning that has an adaptability. Certain environments produce certain adaptation. A change in the environment changes the adaptation, or in this case, the social learning of the child by changing the environment. Is not the present 12 year old what he is as a result of having been a force, an ecological force, within a given milieu? By removing him from that environment, we change the environment. Cannot we expect a change in adaptation? Will the 12 year old of the social maturity level we currently see sontinue if he is developed in a different environment? Will that which has been producing the particular level of maturation have the potentiality for no longer producing that level of maturation because of a change in environment.

When we pull the 12 year old out of the elementary school, to what then have we introduced the 3 and 4 year old? What happens to that environment in terms of its ability to produce a youngster with the attitudes and desires and the skills necessary for Middle School operation?

This is your problem, because you will continue to get the production from that environment, but it is also a problem of the elementary administrator as he attempts to reform the elementary school. This is his function. We must be concerned with the charge that we have, and the program for that charge. These are the reasons that the elementary administrator must be heard. The elementary administrator looks at the Middle School with concern, but offers his support.

SELECTION AND UTILIZATION OF TEACHERS IN THE MIDDLE SCHOOL

ALFRED J. CALI

In starting this particular topic, I'd almost like to revise the title to some extent and would if I thought it would add to the discussion. Actually, any time we discuss personnel we're talking about matters which are relevant to selection, orientation and utilization; often all at once. All of us are schooled enough in our trade so that we don't have to focus here on these terms as specific factors. You'll draw your own implications anyway so let's leave the title as it is.

What I will do is develop and press on a single idea that I think needs to be deeply ingrained in the mind of every person who dares to administer, from this day forward. It probably should have been and is being ingrained in the minds of those who are now or have been administering schools during the past ten years. Before developing this idea, I'd like to start by saying that the Middle School, while it adds some precision to our thinking by providing a problem area, is really unnecessary to this particular discussion. In fact, even as you start defining the Middle School, and I understand you've been handling it globally and will continue to do so over the next few days. I think you will soon become aware that the interpretation of the Middle School is so wide, so individual and so much a matter of local situational decision,that trying to generalize from it is practically useless. I see it only as a desirable organizational excuse to make some needed advances in educational practice.

Before going on, let's say a few things about school organization in general. I think the only organizational structure that I have not seen or heard of in the American public schools is a school system that has a building for every grade. There are some that have buildings for kindergarten and first grade, and maybe even for second and third, then combine all the rest. Some go from kindergarten through grade 14, by the way. If you just wrote on a sheet of paper, K, 1, 2, 3, 4 right up to 14; and then made every possible organizational combination, other than one building for every grade, you could probably find a school system in the United States that has it. I'll bet you could find one third of these combinations in New York State.

What I am trying to say is that very often the decision to recognize a school or establish a particular structure, as you well know, is related to a need which is usually far stronger in a community than is curriculum. I therefore concur with the comment of an earlier speaker indicating that we do not have an adequate curriculum base as a concept for Middle School. I believe that most school systems that have gone in this direction, have done so on the same basis as when they went and took their old central high schools and turned them into elementary buildings just so they could build a brand new central high school. You got much more support for the high school than you could get for the elementary. Also, at that particular time there was a need to develop facilities that were suited to a new educational scheme that was becoming conceptualized in terms of program and that included laboratories, gymnasiums and other new configurations. Therefore, it was probably much easier for educators to start from scratch and build a new high school. Of course, then we had to do something with the old building. I would suggest that it might very well be time for educators, along with a lot of other people, to consider very seriously the proposition that we build expendable buildings, as well as to accept concepts of obsolescence, and stop building the monuments that we have been and are presently building.

I think that there are some things that are happening, new schemes, new approaches to education that will suit the Middle School merely because the Middle School is the newest organizational animal we have. Also, it is touching upon an age group that is our greatest dilemma, the early adolescent. It is interesting to note that secondary teaching trainees have for some time tended to avoid assignments to the junior high school if they can. But those positions are often held by teachers who have had experience in the system and who have "earned the upper classes." While I think this is being changed somewhat by specialists who are beginning to really want to teach this age group and to focus on the junior high school as a special area, the element of relief for those who don't want to teach them, which is woven into the fabric of the Middle School concept, cannot be overlooked and is no doubt a large factor in its attractiveness to certain educators.

I believe that many of the awarenesses and concepts of the Middle School are rooted in and will accomplish some of the better things included in the original junior high school conceptions. This has implications for staff; it has implications for organization. I think, for example, that team teaching, in its most valid forms, will not be found in the elementary school, per se, and it will not be found in the senior high school, per se. It probably will not be found in the more formally organized junior high school structures, but it will be designed and in fact has been found most applicable in those organizational structures that are closest to what might be called Middle Schools. I think the reason for this is, that having a new invention on our hands, we have a little bit more courage about applying what we know. For example, the application of available technologies, the application of individualized instruction techniques and other approaches will tend to occur more often in new educational settings than in older ones. I think, for example, that some of the pressure to departmentalize the elementary school and to provide specialist service and impact upon that age group is going to be more carefully considered and resolved in those settings where the Middle School is being designed and implemented than where elementary, junior high and senior high schools retain their standard relationship. This will be true despite the fact that specialist staff utilization will accelerate across the whole range of the educational enterprise, from early childhood to adult education program levels.

Now this has a lot to do with personnel selection and utilization. It is here that we touch on the one idea mentioned earlier. The one thing I'd like to be sure you take away from this talk is that: educators will be dealing with more professional specialized personnel within their organizations than they ever have before and that the assignments of these people will be affected by the procedures and standards of the professional reference groups which represent these specialists. Thus, the base professional identity of staff members in educational organizations will be dramatically varied and less education oriented, and the liaison of educational leadership personnel with persons of unique competence will be widely varied.

We have introduced psychologists, guidance counselors, and many other kinds of specialists into the school. I would assert that in most instances, these specialists have derived from the teaching body and are really classroom teachers or teacher-trained people who have been revamped or have been upgraded in terms of certain special skills and then reinserted into the educational environment. They are relatively easy to deal with. What I am saying is going to be different in the future is, that we are going to be dealing with more staff members who come into the educational environment, our setting, our organization, our administrative complex and who will come in not as educators, but as specialists in their own right. These people will come from completely different reference groups and with completely different attitudes about what education is. This is going to present a profound adjustment problem for the schools and for administrators, even as it presents a unique opportunity to achieve an elevated quality of service to learners.

For one thing, it is going to shift rather dramatically what we call "sources of authority." I might suggest that the pamphlet by Dick Shilling produced by the Council for Administrative Leadership is one that you will all want to read, Dick is speculating about this business of authority and delegation. I think he has received many interesting responses to what he has written even those that are highly negative do at least indicate awareness of the problem. He is not trying to sell anything; he is just trying to think about this thing because he has sensed what is happening. I would suggest that you, as all administrators, need to sense what will be happening in the schools when we start getting significant numbers of highly specialized, highly competent staff members who come from reference groups other than education.

I might suggest, for example, that some of the discussions that are less than amicable which you may have had with, let's say a physican, might give you a clue to the kind of thing that you are facing when you start putting people on the staff who come from different reference groups; who come with quite a bit of social power in terms of their identification, and who come into the educational setting to function as a part of that organization. For example, I think that technology is upon us; I think that we are going to have to use it. Many schools are going to move into this by contracting. They will contract for educational television sets; they will contract for computer services and with university television and program services and many more. Many of the people that they will deal with will be contract personnel who will be representing another organization as they negotiate services offered to the school. The necessity to have staff capable of interpreting what the school needs and wants, with enough power to assure that these things occur to the best interest of the school, is going to present unique situations to the schools.

Many of the schools as they get large and as the regional type city becomes a reality, will actually become their own production agencies. As such then, there will be large groups of staff involved in a detached way in the production of educational materials; programs of all sorts, without any contact with the learners except through educators who will be doing interpretive work. Therefore, a whole new segment of staff will need to be added. What they will be called I am not sure, but for our purposes we can call them interpretive educators. They will be educators who will maintain liaison between the production specialists and the practicing classroom personnel who will be specialists in their own right and in their own areas. Those interpretive educators will bring broad backgrounds of training to their roles but will be focusing on special subjects such as science and on mathematics; or will be focusing on program design and its effect on human development. In any event they will be doing work with the people who will be producing programming and at the same time working with teachers in classrooms or in other direct teaching situations.

This particular kind of staff member will not be supervisional in the sense that you and I know supervisors now. They will not have, for example, direct authority. They will be purely consultative. The school administrators have toyed with the term "consultant," but have never been able to really free it from a classical supervisional assignment interpretation. In most instances, very few of us have really worked with a person who can truly be defined as a consultant. This will be a particular problem in the next ten years and I think that those of us who will go into the Middle Schools and apply these new techniques will be facing this problem, before the rest.

In addition to having specialists who come from other reference groups and who bring their own sources of authority, we are going to be in a situation where we will be hiring many resource staff on a part-time basis, some by special contact. These people will probably duplicate and even exceed in number the toal full-time staff in any given school setting. They will be part-time employees in some instances; in other instances, they will be volunteers. Some of you already have parents or teacher-aids in your schools who actually meet both of these criteria. This type of staffing is going to accelerate. I would suggest that the number of partially involved individuals in a school is going to be such a dramatic problem that the administration of their activities is going to move downward in the organizational structure out of what we typically classify as administrative circles, and is going to move straight into the classroom. In fact, many teachers will begin to assume responsibility for more and more administrative activities related to auxiliary personnel that typically are presently part of the principal's responsibility.

For example, and this is best seen in the operation of teams, I think that teachers who are heads of teams will actually be making the arrangements for when or how these part-time people will work. Probably the most the teacher will do will be to inform the administration of the fact that "so and so" has, in fact, operated in a given capacity on "such and such" a date.

We are going to have to become attuned to something else that is related to specialist staff use. That is that given school agencies are very likely to be widely distributed geographically. Now this isn't a very profound declaration. Some of you will say, "Well, we already have that in our school system; we have a school over here and a school over there." I think that the difference is, that in some instances, there actually will be educational properties that will not be schools at all, but will still be monitored by a staff that will take groups in on some kind of an arrangement basis to accomplish one or more of your special teaching activities.

For example, let's say that in a given school system there are several different buildings; a couple of high schools, two or three Middle Schools and a group of elementary schools that feed into them. In addition to these, I believe there will be special learning centers in this community that will bring in groups of children to do special things. These centers may or may not be owned by the school district but will be monitored by "contracted" or by fully employed school district staff who will be specialists working in a given learning or problem area. They will be handling given groups of children over short periods of time. These children will often live-in during those periods of time. Thus, they will actually come under the supervision of the school for 24 hours a day, for two or three weeks or even more, and then be returned to their home and school setting. These special staff and those in the usual school organization will have more to say about what things will happen to learners and how they will happen than ever before. The effective administrator will help them add their specialist talents to the learning environment, without allowing them to segment the educational enterprise into an incoherent crowd of special interests.

I think that much of this is going to come to pass. Much of it will start first out of our trying to do something about expanding the social adaptability of children. We have already tried this with some of the school camp or outdoor education settings and some learning disabilities centers. We are going to do it in other areas in the future. The Middle Schools will be ideally suited to do much of this because, in that age group, children are young enough to be affected on a real level and yet they are old enough to do something about it themselves.

In conclusion, the thing I'd like to add to this business of the major personnel problem as I see it, the dealing with and procuring of large numbers of highly specialized staff, is that the educational experiences which we provide in the future are going to have larger increments of reality than presently exist, and the middle school will give us a new opportunity to provide consideration of educational needs.

I hate to be hypercritical, but the elementary and secondary schools as organized and supported have been pretty effective in holding off a large amount of our responsibility for introducing real experiences to children. When we, as educators, really get the full measure of the opportunity given to us right now on the Middle School, we will take to the concept. We will take the organizational opportunity, and we will use it as a way to try some things that we really believe but which we haven't been able to try in our present organizations. Therefore, if the Middle School means anything, it means that we will have the opportunity to be dealing with people, large numbers of people who have special competencies and understandings far beyond our own, who will be making them available to us, and insisting in turn that we make them educationally available in real ways. I would suggest that that kind of staff is not the kind of staff to which we are accustomed, and we really have some learning to do!

INTRODUCTION TO THE SPEAKER

HENRY F. OLDS, JR.

Among instructional alternatives offered in, and appropriate to the middle school one of the prominent suggestions is the utilization of the nongraded arrangement. This organization has been recommended for the junior high school by the Association for Supervision and Curriculum Development, and is being espoused for all levels of the public school by its exponents. Its rationale of permitting students to move through the content at their own most effective speed rather than being compartmentalized in grade blocks seems quite appropriate for the middle school philosophy.

Henry Olds of Harvard University is highly qualified to speak to nongrading due to his current work in schools surrounding the Boston area. He is serving as a consultant and speaker throughout the United States both in nongradedness and team teaching, an area in which he served as co-editor with Shaplin of the book Team Teaching.

THE NON GRADED MIDDLE SCHOOL

HENRY F. OLDS, JR.

I have been asked this morning to talk to you about the nongraded middle school. I see this topic as having three distinct parts: the middle school, nongrading, and the relationship between middle schools and nongrading. The schedule for this conference informs me that during the past four days you have heard a number of distinguished educators discussing various aspects of the middle school. I shall not, therefore, dwell overly long on the nature, purpose, and function of the middle school as an institution. Doubtless, you all know more about the middle school at this point than I do. However, there are certain aspects of the movement to establish middle schools about which I would like to raise some interesting questions about whether it makes any sense to talk about a nongraded middle school, about the real significance of a nongraded approach to the middle school years, and about some related educational problems that we all should be considering.

The most obvious change that the middle school makes in the structure of our educational system is to return to its former place in the high school the ninth grade and to remove from elementary schools the sixth (and sometimes the fifth) grades. In many ways, this is probably not a very big change. There is some question whether the ninth grade ever really managed to escape in any significant way from the high school, and it has been fairly convincingly argued that the sixth grader is on the whole more closely akin to his seventh and eighth grade peers than he is to those in the fourth and fifth grades. However, the net effect of the change, that two grades have been displaced upward in the vertical organization of the school system, is somewhat disconcerting. There is tremendous pressure today upon our schools to teach more and more to children at an earlier and earlier age. I for one resent this pressure, and I tend to look upon any educational change that seems to be a response to this pressure with a good bit of concern. Should ninth graders really be returned to the high school where, to even a greater extent than is now the case, they will be subjected to the pressures of achievement that tend to characterize so much of the secondary education ?

And should sixth graders as a group be moved into an institution that seemingly must have as one of its goals the preparation of children to enter high school? It is not, I think, overstating the situation to say that a child's vertical progress through our educational system is best characterized by an ever increasing attempt to teach him more and more about what educators have agreed he should know, and that the faster we push him along this continuum the better the job we are doing. The "Cult of efficiency" is deeply intertwined in our cultural fabric. Dr. Francis C. Bauer has aptly commented on this phenomenom:

> We have, in recent decades, made something of a fetish of progress. The need to change, often for its own sake, has embraced every aspect of our living including, unfortunately, our methods of infant and child care. As a result we have literally pushed our children out of infancy by weaning, toilet training, and sending them off to school before they are really ready for any of these events. We have robbed them of their childhood by organizing their games and structuring their play activities according to adult rules and standards. We have placed great significance on performance and achievement thereby encouraging the attempt of status conscious parents to accelerate the progress of childhood development. We have indeed propelled our children toward maturity and independence and insisted that they assume responsibility sometimes before they are ready for it.

Margaret Mead also notes this problem and raises a second question that we should consider:

This emphasis on earlier and earlier participation in adult activities is superficially incongruent with the junior high school movement designed as it was to protect the young adolescent by a separate pace of slower induction into the complexities of high school life. The whole movement began when thinking in chronological age group terms had not been amplified by our knowledge of the great extremes of variation in the ages that boys and girls enter their growth spurt and enter puberty. Junior High Schools were designed for children in three "grades" of school: 7th, 8th, and 9th. The grades were postulated on age and not on size, strength, or stage of puberty. They have resulted inadvertently in classifying together boys and girls at the age when they vary most, within each sex, and between the sexes, and are least suited to a segregated social existence. Also, they have divorced them from the reassurances of association with the children like their own recent past selves and older adolescents like whom they will someday become. When a type of school that was designed to cushion the shock of change in scholastic demands has become the focus of social pressures which were once exerted in the senior high school, problems have been multiplied.

The second question which Dr. Mead raises is whether or not it makes sense to group together in one educational institution children who are perhaps similar in some ways but who undoubtedly vary tremendously in other ways. As I understand it, one kind of argument that has been advanced for the creation of middle schools is that it would be wise to group together in one institution children who are apparently alike. I take this to mean that pre-adolescents are supposed to be alike in some significant way and that they are therefore should be treated as a group. May I quote a typical statement from the literature:

> The foremost consideration in planning for instruction is to develop a school pattern that will best serve students who have similar intellectual, social, physical, and emotional needs.

Unfortunately, there is a strong tendency throughout education to group together those children who on the surface would seem to be alike, to apply a label to them, and then treat them as if the really were in fact alike. Children who have difficulty reading are classified as nonreaders and treated as such. Children who are slow learners are put in slow learning groups and treated as slow learners. Children who have social or emotional difficulties are put in special classes and treated as problem children. Similarly, some educators look at the pre-adolescent years as an educational problem and seem to think that by institutionalizing the problem in a middle school, it can somehow be solved.

More thoughtful educators--those, I suspect, who have taken the time to really to get to know children of this age--sees the tremendous variety that will be encountered amongst any group of pre-adolescents. Whether or not the variety amongst individuals at this age is in fact any greater than it is at any other age, is, I think, still an open question. My hunch is that the variety may not be very much greater but that during this particular period of the child's life his individuality is more on the surface, the differences between two individuals are more apparent, than any other time in his life. However, it is perhaps true that at this particular stage in a child's life, these differences do become exaggerated. I will quote just one estimate of what one might expect to find in a typical sixth grade class:

> If, for the sake of having numbers easy to remember we were to assume a "typical" class of forty, than, in the sixth grade it would be composed of two fully adolescent girls, eight preadolescent girls, ten childish girls, four preadolescent boys and sixteen childish boys.

I think this estimate only begins to suggest the range of differences that might be found in such a class.

Is the middle school, then, merely another attempt to provide a simplistic solution to a complex educational problem--the problem of adapting an educational program to a wide variety of educational needs--or do those who advocate middle schools believe that they are honestly trying to come to terms with a real educational dilemma? If the former is the case, then the result should be no happier than most of our present junior high schools. If the latter is the case, and there seems to be some indication that it may be, then we may be watching the birth of a significant educational development.

One more reservation about the middle school movement. There seems to be an assumption that if you change the name of the game, you also change the game. True, there is a certain magic in names, and the name "junior high school" is doubtless an unfortunate choice to describe the intermediate phase of education with which we are concerned. Creating a new institution may well be of some practical help to school administrators in freeing the educational program from the expectations associated with traditional junior high schools and may well help to encourage exciting innovative practices within these new institutions, but such simple magic often has a way of backfiring and leaving a practitioner on the horns of the same old dilemma. Hasn't the junior high school, while admittedly suffering from being considered as a junior version of a high school, suffered long enough from being caught in the middle?

Isn't the middle school all too likely to find itself still caught between the high school and the elementary school, two institutions whose goals and methods of operation differ rather substantially?

With all these thoughts, questions and reservations before us, let us now look at one educational innovation that is often mentioned in connection with the middle school, that is nongrading. Nongrading is essentially a very simple concept. A truly nongraded educational program would attempt to provide for each individual at each point in his intellectual and social-emotional growth an educational experience that would be of the most benefit to him at that time. Such a program is, of course, an ideal toward which we might all aspire, but not a goal that we are ever likely to attain. However, the term "nongradedness" while suggesting an ideal also suggests a method for attaining that ideal, that is no grades. As Professor Robert Anderson has noted:

> Nongradedness refers to two dimensions of the school and its atmosphere; the philosophy, (or the value system) that guides the behavior of the school staff towards pupils, and the administrative-organizational machinery and procedures by means of which the life of the pupils and teachers is regulated. In short, nongradedness is both a theoretical proposition and an operational mechanism. Unlike term teaching, it is not a new staffing pattern. Unlike educational television it is not a technological innovation. Consequently, it is not a component of the curriculum reform movement, though it may very well be the chief inspiration behind that movement. Rather, it is a concept of the proper way to provide for children's educational needs and a plan for implementing that concept.

Unfortunately, between the specific practical recommendation of no grades -- and the theoretical ideal of providing for each individual student's needs during the course of his education, there is a tremendous gap that is evident in both the very few serious attempts to operate a nongraded school and in the considerable confusion that seems to exist in the minds of educators about nongrading. For example, Anderson notes that:

> Most of the efforts at nongrading between 1942 and mid-1960's can be classified as follows: (1) Serious effects to give the idea full scale development in a well-conceived form, (2) Serious effects to implement one or more aspects of the nongraded idea in a well conceived form, (3) Modest e-forts to achieve nongrading within a nonadequate theoretical frame of reference, and (4) Fraudulent or naive use of the vocabulary of nongradedness to describe what is in fact a conventional graded program. Fewer than a hundred programs fall into the first category..not a great many more fall into the second category. The overwhelming majority belong in the third category, and there is an embarrassingly large number in the fourth.

It is my feeling that in their approach to nongrading, far too many educators have interpreted the idea far too literally. If nongrading means nothing more than removing grade labels from the schools, then it has relatively little significance for education. Clearly, it means considerably more than this, for grade labels are merely one of the more obvious examples of a tendency in education which I mentioned earlier, that is the tendency of all of education to create groupings of children, give them a label, and then treat them as if they were all alike. It is this tendency which true proponents of nongrading are trying to counter. What sense does it make, after all, to abolish grade level designations and then to form new groups of children on the basis of some single criterion such as reading scores? The net effect of such a practice is to form a new series of graded groups (perhaps they will now be called fast readers, average readers and slow readers) within which individuals will still be treated as if they were really like the other members of their group and not as individuals. In fact, the whole tendency to substitute for grade labels groupings that are based upon such results of standarized testing scores runs as much counter to the philosophy of nongrading as does the traditional method of grouping children of the same age together and then treating them as if they were alike.

But, you will object, our educational system forces us to place the children in groups for instruction. Yes, that is true; but we have only recently begun to explore the tremendous variety of kinds of groupings that are possible, and we have only begun to build into our educational programs the kinds of adaptive mechanisms that will allow that program to respond more sensitively to the needs of individuals. Let me try to give you a couple of examples of what I mean. At the University Elementary School in California, Professor John Goodlad and his staff are exploring the use of various types of criteria for placing children in different types of groupings.

Given an individual child, the first matter that the staff considers is what kind of a teacher would be most beneficial for this child at this point in his growth. Such a decision requires the staff to have not only extensive knowledge about individual children, but also an effective method of evaluating teaching styles. Secondly, the staff asks the question, what children would it be best for this child to be working with at this point in his growth. Again, considerable knowledge of the child in relationship to his peers is necessary to make this decision. And finally, the staff considers where this child should be in terms of his intellectual development in various subject matter areas. The resulting groupings are, of course, flexible and subject to change should it be clear that a child is not benefiting from the group in which he has been placed.

One adaptive mechanism that a school can use to facilitate such a thorough and conscientious approach to the matter of grouping students is the formation of teaching teams. For in trying to decide how best to create an educational program that will best meet the particular needs of an individual child, the more professional opinions that can be brought to bear upon the problem the better. There is little doubt in my mind that a group of professional teachers who have come to know an individual child can better make decisions about the educational and social-emotional needs of that child than can any single teacher. Furthermore, a teaching team can far more readily make adaptations to the needs of a child during a school year than can an individual teacher caught in a rigid program. Many educators who have attempted to develop nongraded programs have, in fact, become convinced that without the facilitating mechanism of teaching teams it is difficult to begin to attempt the nongraded ideal.

So let us now come back to the middle school. Is there not an essential incompatability between the nongraded philosophy and the concept of a middle school? Can one readily believe in the ideal of nongrading and then say in the same breath that there should be a middle school embracing grades six through eight? In her excellent survey of the middle schools Judith Murphy says:

> Intermediate schools, by whatever name, are trying to take account of the special needs and capabilities of children in the years between childhood and adolescence. Boys and girls from ten to fourteen or so, exhibit a social, physical, psychological and intellectural range that bursts the confines of grade patterns and of plain chronology. What they need above all is to be treated and taught as individuals. Insofar as this ideal is realized, it seems to make no great difference what particular age groups are put together for instructional or administrative convenience.

Similarly, Anderson notes:

> The emergence of the 'nongraded school' and various new patterns of staff utilization has made it obsolete to speak of sharp dividing lines between one school unit and another or to consider a particular age group as being inevitably better off when exposed to a certain school atmosphere and learning opportunity.
>
> What is likely to happen is that the various units of each school district will overlap. Each lower unit offering at least a portion of the educational and social opportunities that are abundant in the next higher unit. At the same time, each higher unit will continue to provide--for some of its pupils--some of the opportunities that are characteristic of the lower unit. The idea of a definite break in atmosphere and learning activities between one unit and another is intolerable in the current climate of education. Consequently, much of the historical argument about how each unit should be defined is irrelevant to present-day school planning.

This I believe is the most important lesson that can be drawn from a consideration of the nongraded middle school. If we can agree that this is the proper way to think about the middle school, then we should begin to forget about all the arguments about which grades are to be included and all of the attempts to promote the middle school idea as a new kind of institution. What we will really wish to concern our selves with is the educational program that will somehow best meet the needs of a population of students who have gone beyond the educational program of the elementary school but who need to be involved in certain, still not very well defined, learning experiences before they move on to the educational program of the high school. As we think about what the program might look like, we would do well to use our imaginations and for a short time to think seriously about adolescents in our society.

The report of the two conferences held in Mount Kisco, New York, to consider a middle school for the Bedford Public Schools reflects some of the spirit which should certainly guide a middle school program.

> In short, what the conference proposed for Bedford's middle school was an institution quite different from the conventional image of a school. It would be a school which serves the community and calls upon the community to serve it. It would be a knowledge-centered school.
>
> The buildings, too, would be quite different. The students would be quarted in three distinct houses. There would be two unusual, large, relatively open spaces--the unified arts center and the perhaps semi-enclosed physical education shelter. The building might be cool in the summer and the academic spaces carpeted. Each student might have his own independent study carrel and there would be an extremely well-equipped library plus auxiliary research spaces. Most of the academic spaces might be of unusual size and shapes, some possible without permanent walls.
>
> There would be a new relationship between the school and community, with the townspeople making great use of the school and the school making a greatly extended use of the talented townfolk.
>
> Encompassing and dominating all of these attributes would be the middle school's dedication to each and every individual child--to the new number in education, the number one.

There is much in this summary that sounds as if the school will go a long way toward providing a program tuned to the children's needs. However, such specifications often appear not quite to get to the heart of the issue. At the same time that it is said that the middle school is to be dedicated to the individual child, I am not completely convinced that they are thinking of the individual child.

Therefore, I would like to explore briefly with you two important themes that I would hope an educator considering the establishment of a nongraded middle school program would consider.

The first of these themes is inquiry. Much has been said in recent years about the need of schools to create an atmosphere in which inquiry is encouraged, in which the student is helped in such a way that he begins to ask significant and probing questions of the environment around him. But inquiry if it is to be valuable must be real. It is not finding answers to a teacher's questions; it is not solving problems in order to get the same answers as the teacher; and it is not trying to discover what kind of behavior the teacher would most likely approve of. Herbert Thelen states the case quite well:

> The child in school has very little opportunity for contending directly with the environment. Hence he doesn't know that he can challenge the world in direct transaction, and that it can challenge him right back. Instead, what happens is that the environment speaks to the child through the teacher or through the book. These are faulty transmissions media because the student's attention is directed by language to preselected aspects; the real start of inquiry in the voluntary arrest of attention is simply impossible. Ideas cannot be tested against the environment, they can only be tested against the teacher's or the book's ideas about the environment. Under these conditions, the teacher's authority as classroom manager is confused with the authority of substantive ideas. The result is that for years and years, the child is exposed to the false assumption that truth is the opinion of someone on whom you are dependent for well-being. And this is the assumption of the organization man. He is forever the consumer of the results of inquiries of others, and he does not learn to inquire on his own behalf. Thus our methods of teaching have aggravated the frustration of the adolescent's position in the world of man.[10]

I sometimes wonder if the definition of a teacher in a student's mind is someone who knows the answer. Why is it that so many teachers when presented with new curriculum materials immediately ask for a teacher's guide? I'm quite convinced that any educational program that considers inquiry the sole pro-

> vince is doomed to failure. Students will inquire only if inquiry is a mode of behavior that is characteristic of the educational program as a whole--and that includes teachers as well as administrators.

This brings me to my second theme, community. I mean, of course, that the nongraded middle school program could well develop into a true community of inquiry. Edgar Z. Friedenberg has said that "two aspects of growth that contribute most to a clear self-definition are climatic in adolescence. One of these is the capacity for tenderness toward other persons..The other major development is an attitude of respect for competence." In addition to learning how to inquire, adolescents should also learn something about themselves in relationship to other people. If the teacher is to be a model for the child, then he should exhibit that kind of competence that he wishes to see in turn develop in his students. The mutual sharing of inquiry among those involved in a true community of learning would create an educational atmosphere of considerable value. Jerome Bruner calls this reciprocity:

> for it involves a deep human need to respond to others and operate jointly with them toward an objective.. The psychologist Roger Barket has commented that the best way he has found to predict the behavior of children whom he has been studying in great detail in the midst of their everyday activities is to know their situations. A child in baseball behaves baseball; in the drugstore the same child behaves drugstore..Probably it is the basis of human society, this response through reciprocity to other members of the species. We know precious little about this primitive motive to reciprocate, but what we do know is that it can furnish a driving force to learn as well..It is by much the same process that children learn the beautifully complicated games they play (adult and child games alike), that they learn their role in the family and in school, and finally that they come to take their role in the greater society.
>
> The corpus of learning, using the word now as synonymous with knowledge, is reciprocal..The conduct of our educational system has been curiously blind to this interdependent nature of knowledge. We have 'teachers' and 'pupils', 'experts' and 'laymen'. But the community of learning is somehow overlooked.

Students in our schools certainly do behave school. But is the school that they are behaving the educational experience that we would like them to behave? I doubt that we have really come to grips with this issue. Some of my colleagues and I at Harvard have tried to face some of these issues and to embrace in our philosophy the two themes I have been talking about. Let me read to you some of our preliminary guidelines.

> --That education should take place in a community of learning where students, faculty, and administration act jointly as participants in the learning process.
>
> --That a community of learning is a community of action as well as reflection.
>
> --That within the community tensions are deliberately created that engage all participants in the learning process.
>
> --That in the process of trying to resolve these tensions the individual is encouraged to act autonomously to exercise his free choice within a framework of real alternatives; learning is considered, at least in part, as the ability to tolerate and intelligently evaluate opinions.
>
> --That deliberate encouragment of autonomy within a framework of a real alternative will lead to various forms of risk-taking behavior on the part of both student and teacher. It is anticipated that such behavior will lead to a whole new set of prcedures for the operation of an educational community and that the role of adolescent action within his several communities will be a subject of constant investigation

Of course, this is just a beginning. What such guidelines would mean in terms of the actual operation of a school program we won't really know until some farsighted administrator devises a plan for putting some of them into action. One such administrator is working with us at the present time and will begin in the fall with a special program designed with these guidelines in mind that will affect a large number of his students and a substantial part of his school's program. I quote briefly from his proposal:

> It will be the aim of this project to create a school environment that truly means something to the youngsters who are members and participants in this environment. We hope to involve the youngster in making decisions concerning activities that they will be able to carry out. We are going to try to create an atmosphere where the youngsters believe that they are wanted, that they are working with people who are deeply interested in them, who listen to them, and who respect them.

But I suspect we have gotten away from the topic. Or have we? My experience with educational innovation has convinced me of one important fact. Any time one attempts to make a significant change in the shape of structure of our educational system, one is forced to raise virtually all of the significant problems that have confronted educators at any time. The concept of a middle school, taken by itself, does not strike me as a particularly significant innovation in American education. But the thought of a truly nongraded approach to the education of children in the middle school years raises a host of interesting questions which I feel must be explored if there is to be any value to discussions of the subject. I certainly have not solved any problem for you. My intent rather has been to engage you in a short period of inquiry on the subject of the nongraded middle school. I hope that you in turn will continue this inquiry with your colleagues, with your teachers and perhaps even with your students.

FOOTNOTES

1. Bauer, p. 16.
2. Mead, p. 7.
3. Madon, p. 329.
4. Wattenberg, p. 36.
5. Anderson, p. 54.
6. Ibid., p. 51.
7. Murphy, pp. 10-11.
8. Anderson, pp. 24-25.
9. Middle School, pp. 17-18.
10. Thelen, p. 71.
11. Friedenberg, p. 17.
12. Bruner, pp. 125-126.
13. "Shadow Faculty", I. p. 2.
14. Ibid, VI, p. 3.

SELECTED REFERENCES

Alexander, William M., " The Junior High School: A Positive View, " NASSP Bulletin, Vol. IL No. 299 (March,1965), pp. 276-285.

Alexander, William M., " What Educational Plan for the Between-Ager ?" NEA Journal (March,1966), pp. 30-32.

Alexander, William M. and Williams, Emmet L., "Schools for the Middle School Years, " Educational Leadership (December,1965), pp. 217-233.

Anderson, Robert H., Teaching in a World of Change, Harcourt, Brace (New York),1966).

Bauer, Francis C. MD., "Causes of Conflict", NASSP Bulletin , Vol. IL, No. 300 (April,1965), pp. 15-18.

Berman, Sidney, "As a Psychiatrist Sees Pressures on Middle Class Teenagers," NEA Journal, Vol. LIV (Feb., 1965), pp. 17-24.

Brod, Pearl, "The Middle School: Trends Toward Its Adoption,"Clearinghouse (February,1966), pp. 331-333.

Bruner, Jerome S., Toward a Theory of Instruction,

Harvard University Press (Cambridge,1966).

Friedenberg, Edgar Z., The Vanishing Adolescent, Beacon Press (Boston, 1959).

Coleman, James S., "Social Change: Impact on the Adolescent," NASSP Bulletin, Vol. IL, No. 300 (April,1965), pp. 11-14.

Goodlad, John I and Anderson, Robert H., The Nongraded Elementary School, rev. ed., Harcourt Brace (New York,1963).

Goodman, Paul, Compulsory Mis-Education, Horizon Press (New York, 1964).

Havighurst, Robert J., "Lost Innocence: Modern Junior High School Youth, "NASSP Bulletin, Vol. IL, No. 300 (April,1965), pp.1-4.

Hillson, Maurie, "The Nongraded School,"New Frontiers in Education, Grune and Stratton (1966), pp. 206-223.

The Junior High School We Need , ASCD Commission on Secondary Curriculum (Washington, 1961.)

Lerer, Lawrence, " A Critical Analysis of the Concepts and Patterns of Middle School Organization," Unpublished Doctoral Qualifying Paper, Harvard Graduate School of Education (May,1966).

Madon, Constant A., "The Middle School: Its Philosophy and Purpose, "Clearinghouse, Feb., 1966), pp. 329-330.

Mead, Margaret, "Early Adolescence in the United States, "NASSP Bulletin, Vol. IL No.300 (April,1965) , pp. 5-10.

Middle School, A Report of Two Conferences on the Definition of Its Purpose, Its Spirit, and Its Shape, Educational Facilities Laboratories (New York,1962).

Murphy, Judith, Middle Schools, Educational Facilities Laboratories (New York,1965).

Riessman, Frank, Low Income Culture, The Adolescent, and the School, "NASSP Bulletin, Vol. IL No. 300 (April, 1965) pp. 45-49.

Schmuck, Richard, "Concerns of Contemporary Adolescents," NASSP Bulletin, Vol. IL No. 300 (April,1965) pp. 19-28.

"The Shadow Faculty-Phas II: Toward The'Great' School, " Unpublished proposal to the Research Development Center, Harvard Graduate School of Education (April,1966).

Thelen, Herbert A., Education and the Human Quest, Harper and Row (New York,1960).

Wass, Philmore, B., " The Conomics of Teenagers," NASSP Bulletin, Vol. IL No. 300 (April,1965), pp. 29-33.

Wattenberg, William W., " The Junior High School--A Psychologist's View, " NASSP Bulletin, Vol. IL No. 300 (April,1965) pp. 34-44.

INTRODUCTION TO THE SPEAKER

DR. GORDON F. VARS

One of the more effective instructional procedures which has been used in the junior high school in past years is the core curriculum approach. This methodology has been a valid synthesis of content knowledges and educational theory throughout the secondary schools, but has been even more efficacious in the junior high school than in the senior high school. Some of the more vocal critics of the core curriculum have voiced the opinion that college preparatory functions and the Carnegie Unit in the ninth grade have made the core curriculum a less valid approach then in previous decades. While this issue is surely debatable the Middle school progressing only to the eighth grade may very well encourage a renaissance of the core curriculum with its advantages for the early adolescent.

Dr. Gordon Vars of Kent State University is recognized as one of the foremost authorities in the country in the core curriculum field. His book, Modern Education for the Junior High School Years co-authored with Van Til and Lounsbury is one of the more popular books in early adolescent educational theory. He is the editor of the National Core Teacher and has written numerous articles. Few people in the country can speak with so much authority on the implications of the core curriculum for the Middle School and vice-versa.

THE MIDDLE SCHOOL: IMPLICATIONS FOR THE CORE CURRICULUM

GORDON F. VARS

The junior high school has long been the stronghold of the core curriculum and other forms of blocktime programs.[1] The last U.S. Office Of Education survey, conducted in 1959-60, found block-time programs in 40 per cent of the separately organized junior high schools. For junior high schools enrolling 300 or more students the figure was 50 per cent.[2] John Lounsbury found that a similar proportion, 50 per cent, of the junior high schools he surveyed in 1964 had block-time, as compared with the 59 per cent he found in his 1954 sample. Over the same ten year period he found a very slight rise - from 12 per cent to 13 per cent - in the junior high schools that reported a problem-centered block of time more nearly approximating core.[3]

The prevalence of block-time and core varies from one section of the United States to another. State surveys conducted within recent years have reported block-time programs in the following proportions of junior high schools: Illinois 61 per cent,[4] Kansas 60 per cent,[5] Minnesota 33 per cent,[6] New Jersey 56 per cent,[7] New York 36 per cent,[8] Ohio 54 per cent,[9] and Oregon, 75 per cent.[10] In addition, 46 per cent of all districts operating secondary schools in Michigan reported block-time classes.[11] State education department policies, especially teacher certification requirements, account in large measure for the uneven geographical distribution of block-time programs.

It has always been difficult to distinguish between the various kinds of block-time classes. They range from the mere assignment of a group of students to the same teacher or team for two or more subjects, to "true" core, a block-time class in which the curriculum is organized around problem areas significant to the students, without regard for conventional subjects.[12] Even in schools officially committed to it, "true" core tends to be an ideal toward which many teachers strive but which few attain. Nevertheless, the widespread incidence of block-time at the junior high school level signifies that many educators feel that at least some of its features are good for youngsters at this level.

Let us look at the arguments for block-time and core to see why this type of program might have special relevance for the junior high school years, and then ask ourselves whether a shift to a middle school organization would make any difference. One excellent summary of the advantages of block-time is this, based on a survey of secondary school principals in New Jersey:

Advantages of Block-Time Classes

Teachers have fewer pupils for a longer period of time.

> Teachers can get to know individual pupils better - their abilities, needs, interests, strengths and weaknesses, talents.
>
> The guidance function is more readily achieved.
>
> Teachers have a greater opportunity to individualize education to provide for the individual differences among their pupils.
>
> There are greater opportunities for consistent attention to academic, personal, and social development and the development of habits, attitudes, and values.
>
> There are better opportunities for the early identification of pupils with exceptional aptitudes and abilities and the development of individual talent.
>
> There is more constant and sympathetic attention given to continuous growth of the total individual pupil.

Pupils meet fewer teachers.

> A gradual transition from the self-contained elementary school to the departmentalized high school is possible.
>
> There is more effective orientation and adjustment of the pupil to the new junior high school environment.

> Greater security for the pupil accrues by having one or a few teachers know him well.
>
> Better pupil-teacher relations result.
>
> *The same teacher teaches two or more subject areas to one group of pupils.*
>
> There is more effective correlation and integration of subject matter areas by teachers and pupils.
>
> Greater opportunities exist for application of knowledge and skills - such as language arts skills in social studies learning.
>
> More efficient use of pupil and teacher time is possible by eliminating instructional duplication and concentrating on educational needs.
>
> *Pupils and teacher are together for continuous periods of time greater than a single period.*
>
> More uninterrupted time allows for greater flexibility and variety in learning activities.
>
> Greater continuity in learning experiences is possible since units or topics may be explored with less regard to fixed time allotments and period changes.
>
> Better opportunities are available for pupil-teacher planning and evaluation.
>
> There is easier scheduling of field trips and the use of resources outside the classroom.
>
> Flexibility in program permits teachers to choose educational topics of value to early adolescents whether or not they "fit" the particular "subject area."[13]

Ignoring for the moment the very real difficulties in capitalizing on all these advantages in actual practice - notably finding or training teachers who can do the job -

what would make such a program especially valuable in the junior high school? To answer this question, we must discover what it is that distinguished junior high school education from that of any other level. The functions or purposes commonly attributed to this institution may be grouped under the following headings:

1. Meeting the needs of the age group
2. Intellectual competence
3. Basic skills and knowledge
4. Citizenship skills, knowledge, and attitudes
5. Socialization
6. Vocational orientation and preparation
7. Preparation for further education
8. Exploration
9. Guidance
10. Articulation or transition

I submit that not one of these functions is unique to the junior high school. It is true that the age group we deal with does have some very distinctive characteristics, mainly associated with the transition from childhood to adulthood in our society. Also, articulation is especially important for the junior high school because of its position between two older and more firmly established institutions, the elementary school and the high school. But these are differences in emphasis or degree, not differences in kind. I believe it is these special emphases, not anything unique in its purposes or functions, that give the junior high school its special character.

Where do block-time and core fit in? First, all block-time programs, and particularly those that approach core, are especially designed to enhance the guidance role of the teacher. If there is any time in his life when the youngster most needs the understanding and guidance of knowledgeable adults, it is during the junior high school years. Guidance specialists are too few in number and too isolated from day-to-day association with students to provide anything but a small fraction of this guidance. Hence a program that maximizes the classroom teacher's contribution to this aspect of education is bound to find favor.

Second, block-time and core programs provide a natural transition from the self-contained classroom typical of the elementary school to the complete departmentalization common in senior high. No doubt this accounts for the fact that block-time is most prevalent at the grade level a student first enters after leaving elementary school, usually the seventh grade. The transition function also is reflected in the way many block-time programs taper off, often embracing three or four periods in grade seven, two or three in grade eight, and two or none at all in grade nine.

The articulation argument for block-time in junior high collapses when elementary schools departmentalize. When this occurs, the need for some sort of transition device moves into the lower grades, to be applied whereever necessary to induct students gradually into departmentalized teaching. Hence, in terms of articulation, block-time is valid for any intermediate institution that falls between a self-contained program and one that is fully departmentalized, regardless of the institution's name or grade level organization.

No doubt there are other reasons why block-time and core have proved so popular at the junior high level, but these two seem to be the main ones - enhanced guidance possibilities and smoother articulation. Are these considerations equally important in a middle school organization? To answer this, we must make clear what we mean by middle school.

Some educators see the term as merely another name for the junior high school, especially one that includes grades 6, 7, and 8 rather than 7, 8, and 9. I have no objection to this name change. In fact, I believe that the name "junior high school" has been an albatross around our necks from the beginning, and we would be well rid of it. It connotes inferior status and immaturity and suggests that the junior high is just a "little high school." Perhaps under the middle school label we could better resist the temptation to ape the senior high. Maybe we could get rid of inappropriate interscholastic sports and marching bands (if we ever had any), and could hold out for social activities that are truly geared to the age group we serve. Perhaps junior high people would feel less pressure to departmentalize the entire program in imitation of the senior high. Thus a mere change of name could encourage further expansion of block-time and core programs at the intermediate school level.

Our main concern, however, is for the concept of middle school as a reconstituted intermediate institution, one that embraces grades five or six through eight as opposed to seven through nine. There is much discussion of the relative merits of the middle school and the junior high school, but to date there is no preponderance of evidence for either. Present organizational debates resemble in many ways those that accompanied the earlier shift from the 8-4 to the 6-3-3 pattern of school organization. Frequently, the same evidence can be used for either side of the argument.

Take the fact that youngsters nowadays reach puberty at a younger age and are more sophisticated and wise to the ways of the world than they used to be. This may be used to justify a middle school on the grounds that fifth or sixth graders are ready for studies and social acitivities that are more advanced than those commonly provided in the elementary school. The same fact may be used to argue for a 7-8-9 pattern in order to keep youngsters in elementary school longer, thus hopefully protecting them from growing up too fast. We cannot answer the organization question until we decide whether it is best to try to counteract the tendency toward early sophistication or to adjust our institutions to it.

Ambivalence also may be seen in our conception of what will happen to ninth graders if they are placed in high school. Some fear that they will begin steady dating earlier and imitate the undesirable characteristics of the older adolescents; others assert that the older students, being more mature and stable, will be a good influence on them. Similar contradictory outcomes are predicted when fifth or sixth graders are placed in a middle school. In other words, older students may be viewed as either models or monsters. I am not aware of any conclusive evidence for either point of view; most students that I know combine a bit of both!

Philosophical arguments also are inconclusive. Elementary schools and high schools tend to be permeated with quite different philosophies of education. Therefore, any intermediate institution is bound to be pulled in two directions at once. Shall the middle school, like the junior high school before it, be conceived as a further downward extension of secondary education, with a program that is primarily subject-centered and specialized? Or should the middle school be designed to retain or perhaps re-introduce some of the child-centered, general-education-orientation typical of the elementary school? Or might the middle school offer us perhaps our last opportunity to blend the best of both emphases into a distinctive institution, one truly geared to the special needs and characteristics of youngsters approaching and passing through puberty? We must answer these questions before we can determine the middle school's implications for many aspects of the educational program, not just core.

I favor the third alternative, an intermediate institution dominated by neither the elementary school for the high school. Let us examine some of the essential features of a desirable education program for the middle school period, grades five or six through eight.

For many years it has been assumed that a self-contained classroom, with one teacher responsible for instruction in most subjects, was best for children in this age range. When children are with the same teacher most of the day, they have a home base and a coordinating center for their school activities. The mental health advantages of such a program are set forth by Alice Miel:

> It is a generally accepted fact that efficiency of learning is promoted when children's schooling is carried on in an atmosphere conducive to mental health. It is very important that a child have the help of a sensitive, accepting adult in assessing his strengths and weaknesses and in setting his aspiration level with respect to various facets of intellectual, physical, and social achievement. It is important that an adult who matters as much to a child as does a teacher have a chance to know the child as a total operating individual, not just a learner of arithmetic, a reader, a speller, or a singer.
>
> In a departmentalized setup it is hard for a child to qualify with the teacher of arithmetic if he is poor in that area, even though he may be adequate or even gifted in art or writing.

> To balance success and failure in one's school life, and to make constructive use of both, require guidance during the growing years by a sympathetic teacher who knows each pupil well and who has responsibility for few enough children to be able to care about each member of his class as a complete, learning person. The self-contained classroom gives the teacher opportunity to provide the kind of teacher-pupil relationships which foster mental health.
>
> It is crucial also that a child feel that he belongs to and can help to shape the important school group that is his class. In a departmentalized school, the same children may stay together throughout the day as they change from teacher to teacher. However, it is difficult for a group to build a healthy, supportive esprit de corps when the status leadership changes every hour or so and, with it, expectations, standards, rules, and preferences change...In the self-contained classroom children work and play together in many different kinds of relationships under the eyes of one adult. They have a chance to learn about one another's potentialities and limits with the help of a person who is in a position to know and care about the whole persons...
>
> An important ingredient in mental health, and therefore in learning, is good feelings toward self and others. Developing these feelings can realistically be on the agenda in the self-contained classroom. Attention to feelings and active work in promoting learning along this line are not the charge of, nor are they made easy for, the teacher meeting a succession of different classes throughout the day. [14]

To my knowledge, these mental health arguments have neither been proved nor disproved by research.[15]

Reports from school people are conflicting. School officials in Indianapolis, Indiana, for instance, after trying departmentalization in grades 4-6 in some of their schools, concluded:

> From research and consensus of teachers, principals, and administrators it was decided that self-contained classrooms were more effective for children of this age. The correlation of subject matter permitted by the self-contained classroom gives intermediate grade children more stability, confidence, and a better rounded program of instruction. It gives teachers an opportunity to work more intensively with individual pupils, to understand their problems, and guide them to achieve their greatest potential in all subject matter areas.[16]

However, a respondent from West Covina, California, asserted that "changing classes in all grade levels seems to make classroom discipline easier" and that "children are invariably happier, particularly with greater variety and stimulation provided by having specialized teachers in each area."[17]

Some of the research on team teaching has attempted to assess the effects of a multiple-teacher situation on student mental health or adjustment. By-and-large, working under the direction of several teachers does not appear to have any harmful effects on students, at least as measured by available instruments. It does not seem to have any markedly beneficial effects, either, so we are right back where we started.[18]

Another set of arguments for self-contained program revolves around the use of time. Miel says:

> One of the greatest advantages of the self-contained classroom is the economy in learning afforded. This economy is effected in several ways. An important factor is the possibility of working on several goals at once. For example, while the teacher is helping children with social studies, he can also be helping them improve in reading skills. Knowing where his children are in various aspects of the task of learning to

read, the teacher can reinforce certain skills, when the children are working with written science materials or searching for an answer to a timely question arising in that no man's land belonging to no subject in particular. Helping children with spelling and correct written expression in connection with all subjects is the responsibility and opportunity of the coordinating teacher, whereas the departmentalized teacher often finds that children expect to write and spell correctly only for the English teacher.

The teacher in the self-contained classroom can work simultaneously on other goals also. Helping children advance in social learnings such as considerateness, justice, and critical thinking can proceed during snack time as well as during a writing time, during an art period as well as during a discussion in social studies. Helping children develop competence in personal-social problem solving is the sort of teaching which falls between teachers in a departmentalized school. The possibility of cutting across subject boundaries is essential for finding the time and creating the situation in which learning can take place through experience in solving real problems involving values...

The teacher in the self-contained classroom is not so likely to fall into the trap of expecting a child to work "up to capacity" simultaneously in each curriculum area as is the departmental teacher, who sees the child only in relation to his own area. Helping children become self-directed learners who can help to make realistic plans for themselves can be on the agenda of the self-contained classroom in a way that it cannot be in the departmentalized school, where responsibility for such pervasive learnings is everybody's business and therefore nobody's business.

> A definite and appreciable advantage of the self-contained classroom from the standpoint of economy in learning is flexibility in use of time...Where one teacher is responsible for coordinating all the learning of one group of children, he can arrange a time schedule according to his judgment and that of the children as they plan from day to day and week to week. On occasion, an extra five or ten minutes spent on arithmetic will clinch an explanation, whereas carrying over the lesson to the next day may mean almost starting over...
>
> The advantage of the self-contained classroom when it comes to carrying out studies or units cutting across subjects, or planning and scheduling trips and the use of resource visitors is no small one either. In short, where the departmentalized school is set up for working on separateness, the self-contained classroom is organized to allow time and opportunity for integrating and generalizing.[19]

I have quoted at length from Alice Miel's assesment of the self-contained classroom, but many of the same arguments may be found in the literature on core. Note how many of them resemble the advantages of block-time cited by the New Jersey administrators. In a bulletin on the self-contained classroom published by the Association for Supervision and Curriculum Development, Della-Dora states: "'Core' classes of the secondary school are self-contained classrooms in every sense of the word except for the length of time which a group and its teacher spend together daily."[20] Indeed many of the co-authors of this ASCD pamphlet are also active in the core movement.

To be honest we must acknowledge that all these advantages may not be realized in every self-contained classroom, or in every block-time or core class, either. But the potential is there, and I believe we would be foolish to departmentalize completely either the middle school or the junior high school and thereby destroy this vital potential. As Miel so aptly puts it:

> It is as if we were to say, "Some mothers do not furnish the mother love we believe so necessary for a good start in life; therefore, we shall not allow any children to have mothers!" If a type of organization has more promise for accomplishing certain goals (better mental health, more integrated, more complete learning), then our best course is to work toward the realization of the potential that is there.
>
> The same may be said for use of time... The intelligent course is to continue a type of organization which invites and facilitates interrelatedness and attention to learning that falls between subjects and that makes it easier for a teacher to provide for all the ways in which a child may learn differently from his classmates.[21]

From the early thirties, block-time and core programs have been used to extend these valuable features into the secondary grades. If we are truly concerned for the welfare of children, we will strive to retain these features, whatever name we give to the program or however we organize the institution that houses the intermediate grades.

Thus far we have dealt with the theoretical arguments for block-time and self-contained programs. A very practical consideration has to do with staffing. It has always been difficult to find teachers for junior high block-time and core programs, especially in states like New York where secondary teachers certified in two or more subjects are scarce. Wherever certification regulations permit, many administrators have hired elementary teachers, finding that they often adapt to this kind of program more readily than those with secondary preparation. Since a middle school block-time program is likely to be essentially a modification of existing self-contained program, teachers are already at hand. Moreover, colleges and universities continue to graduate many upper-grade elementary teachers who have the broad preparation and child-centered outlook desirable for the kind of teaching described above. Thus a major obstacle to the development of block-time and core - the shortage of teachers willing and able to teach it - may be removed -f the middle school is constituted from grades that fall within elementary certification regulations. This will not eliminate the need for continuous inservice development of teachers, of course, nor will it relieve school administrators of their responsibility for providing that crucial ingredient, leadership.[22]

At the present time there is much hue and cry about strengthening education through increased attention to the separate scholarly disciplines. Nevertheless, it is encouraging to note the extent to which schools are resisting the temptation to completely departmentalize the intermediate grades. Less than half of the more than 400 school systems surveyed by the National Education Association in 1965 had departmentalization in any of their elementary schools.[23] Even among those that departmentalized to some extent, many continued to schedule children with one teacher for a large block of time, often for language arts and social studies, and sometimes a second block was provided for mathematics and science. Similarly, another N.E.A. study of 20 systems with middle schools revealed that a vast majority were only partially departmentalized, especially in grades five and six.

In sum, whatever implications the middle school idea has for core depends entirely on what kind of institution the middle school turns out to be. If it becomes simply a child-sized version of the high school, there will be little room in it for core, block-time, or self-contained programs. On the other hand, I cannot conceive of an institution that is truly designed to fit the needs and characteristics of young people through the middle school years without some version of the core curriculum. School administrators, and especially local building principals, bear primary responsibility for determining the nature of the middle school. Core provides a vehicle for accomplishing a number of vital education tasks. I hope we will continue to use it to the full in whatever intermediate institution evolves.

FOOTNOTES

1. Core is viewed here as a particular variant of the block-time class, which is defined as a class that combines or replaces two or more subject areas that are required of all pupils and usually taught separately.

2. U. S. Office of Education, The Junior High School: A survey of Grades 7-8-9 in Junior and Junior-Senior High Schools, 1959-60, by Grace S. Wright and Edith S. Greer. Bulletin 1963, No. 32 (Washington: Government Printing Office, 1963), p. 20.

3. John H. Lounsbury and Harl R. Douglass, "Recent Trends in Junior High School Practices," Bulletin of the National Association of Secondary-School Principals, Vol. 49, No. 302 (September, 1965), p. 92.

4. Illinois Department of Public Instruction, Block-of-Time Scheduling Practices in Illinois Junior High Schools (Springfield: The Department, 1960), p.3.

5. Orvel A. Criqui, "A Study of the Curricula of Selected Kansas Junior High Schools" (unpublished doctoral thesis, University of Kansas, 1962).

6. Nelson L. Bossing and John F. Kaufman, "Block-Time or Core Practices in Minnesota Secondary Schools," The Clearing House (May 1958), p.532.

7. New Jersey State Department of Education, "Block-of-Time Programs in Junior High Schools and Six-Year High Schools in New Jersey," Secondary School Bulletin, No. 2, March 1960, p. 1.

8. Norman W. Wilson, "Block-Time Programs in Junior High Schools and Six Year Secondary Schools of New York State, 1961-62" (Ithaca, N.Y.: Junior High School Project, Cornell University, 1962,) p.4.

9. Glenn W. Schaller, "Block-Time Classes are Growing in Ohio," *Ohio Schools* (November 1962) p. 22.

10. Oregon State Department of Education, "Some Characteristics of Oregon Junior High Schools" (Salem: The Department, n.d.). (1964-65 data.)

11. Michigan Department of Public Instruction, *The Status of Block-Time Programs in Michigan Secondary Schools,* Bulletin No. 426 (Lansing: The Department, 1960), p. 1.

12. The various types of block-time and core programs are described in *Modern Education for the Junior High School Years,* by William Van Til, Gordon F. Vars, and John H. Lounsbury (2d ed.; Indianapolis: Bobbs-Merrill, 1966), Chapter 8.

13. New Jersey State Department of Education, *op. cit.*, pp. 2-3.

14. Alice Miel, "The Self-Contained Classroom: An Assessment," *Teachers College Record*, Vol. 59 (February, 1958), pp.284-285.

15. Harold G. Shane and James Z. Polychrones, "Elementary Education - Organization and Administration," *Encyclopedia of Educational Research*, ed. Chester W. Harris (3d ed.; New York: Macmillan, 1960), pp. 426-427.

16. "Departmentalization in Elementary Schools," *Educational Research Service Circular*, No. 7, 1965 (Washington: National Education Association, October, 1965), p. 18.

17. *Ibid.*, p. 16.

18. See Glen Heathers, "Research on Team Teaching," in *Team Teaching,* ed. by Judson T. Shaplin and Henry F. Olds, Jr. (New York: Harper and Row, 1964), pp. 331-335.

19. *Op. cit.*, pp. 285-286.

20. Delmo Della-Dora, "The Self-Contained Unit in Action in the Junior High School," *The Self-Contained Classroom*, ed. by Edith Roach Snyder (Washington: Association for Supervision and Curriculum Development, 1960), p. 65.

21. Op. cit., pp. 286-287.

22. See Gordon F. Vars, "Administrative Leadership - Key to Core Program Development," Bulletin of the National Association of Secondary-School Principals,Vol. 46, No. 271 (February, 1962), pp. 91-103.

23. "Departmentalization in Elementary Schools," op. cit., p.1.

24. "Middle Schools," Educational Research Service Circular, No. 3, 1965 (Washington: National Education Association, May, 1965), p.3.

INTRODUCTION TO THE SPEAKER

HARVEY HANDEL

The application of core curriculum thoery to the work in public junior high schools or the middle school may be primarily ascertained by observation of the statements of administrators in the field who are utilizing the method. One level of core, and that which is most ordinarily found in schools, is found in the block-time arrangement. Here one teacher, in many cases teaching two or more subjects, has primary responsibility for one class for two or more periods. While block time is quite common in many parts of the country it is relatively rare , due to teacher certification requirements, in the secondary schools of New York State.

One school in the Albany area which is utilizing block-time quite successfully is the Oneida Junior High School in Schenectady, New York. Harvey Handel, the principal of this school, has a deep faith in the block-time approach, and presents a very erudite as well as practical viewpoint in his presentation. Here again it should be noted that teacher certification standards may present less of an obstacle to block-time arrangements in the middle school than in the traditional junior high school.

ADMINISTRATOR'S REPORT ON A GENERAL EDUCATION PROGRAM

HARVEY HANDEL-PRINCIPAL

The 'general education' program was introduced at Oneida Junior High School in 1931. At the time, the school housed grades K through 9. Two forward looking educators from Schenectady, Harry Linton and Roy Abbey, working with the faculty and consultants from several colleges, planned this innovation. The stated philosophy was," We are attempting to discover the needs of our children and then to help them solve the problems which grow out of their needs." Although grades K through 6 moved into new elementary schools in 1965, and the philosophy has been expanded to keep up with the changing times, the general education program has continued without interruption for thirty five years.

General education included English, social studies and arithmetic in grade seven and English and social studies in grade eight. The primary purpose of the curriculum was to provide a common body of important experiences for all pupils emphasizing social values and social problems. It continued, for at least one year, the self-contained classroom of grades six and below, helping to span the difficult years of early adolescence when the student was poised between the child centered curriculum of the lower grades and the subject centered curriculum of the high school. The advantages, as the planners envisioned them were:

1. freedom from subject matter patterns,
2. emphasis upon group problem solving,
3. opportunity for pupil-teacher planning,
4. provision of a daily block-of-time, and
5. greater attention by the teacher to the guidance function.

It came about long before Grace White reported in 1958, in the "Bulletin", that the ratio of use of block-of-time classes had doubled in the period of 1941 to 1957.

---

*' general education' in this report is used synonymously with block-of-time.'

The reader may be helped to understand the significance of a general education program to this school if he had a brief description of Oneida Junior High. Nearly 850 students share this facility which was built in 1923. Current utilization is 98%. A major addition and complete renovation has been recently approved by the Board. The student body is heterogeneous in the classical sense of the definition-dissimilar. The school serves the children of the affluent and the deprived, the educated and uninformed, the ambitious and unmotivated. The median I.Q. of the student body fluctuates between 104 and 108, but has been moving downward in recent years. Oneida is widely recognized for its innovating spirit, and its successful graduates. Esprit's de corps is apparent in the enthusiasm of the faculty who give willingly and unselfishly to improve the educational offerings.

My observation of types of general education programs in the decade from 1950 to 1960 indicate that:

1. more large schools were making use of this scheduling arrangement than small schools.
2. traditional practices prevailed in about 3/4 of all classes using general education as an administrative device, rather than as a curriculum innovation,
3. there was a better counseling relationship since the general education teacher was invariably a homeroom teacher responsible for the guidance function,
4. the definite growth in popularity was most marked at the junior high school level; never gaining a real foothold in senior high, or even ninth grade,
5. there was some evidence appearing that a block-of-time, or a general education program would become the predominant pattern of organization in most junior high schools.

Three new forces, of which you are all aware, began to appear about this time:

1. Sputnik, with an outcry for intellectualism based on academic excellence,
2. team teaching, bolstered by more flexibility in space utilization and pooling of teacher resources,and

3. the middle school which began to have an effect on school organization.

Sputnik panicking is no longer an essential force. However, the advantages of team teaching and the philosophy of the middle school have had a significant impact on curriculum organization with an increased vitalization of general education and block-of-time.

At Oneida, the community has accepted the philosphy that has been prevalent since 1931, and there has never been any strong pressure from either within or without the change. The faculty of the school was carefully selected on a basis of training and commitment to general education. Those who found that teaching their major had more personal appeal,moved into ninth grade or senior high, (if they were competent). Those who were caught up in the excitment of teaching in a general education program took additional training and eventually received dual certification. Since 1931 not one teacher, to my knowledge, has been prevented from teaching in the general education program at Oneida School because of certification requirements.

What about mathematics ? It remained in the general education block until quality measurement studies made by the writer indicated that a serious weakness did exist when youngsters were compared on various achievement tests and were found lacking in arithmetic and problem solving skills commensurate with their ability. The nation-wide drive to upgrade the training of science and mathematics teachers was having its effect on the quality of teachers who were available for employment. Oneida employed highly skilled mathematics teachers, some of whom were science majors in their undergraduate work. Movement toward discovery centered teaching, instead of rote learning of both scientific and mathematical concepts, indicated that two distincts types of general education specialists were needed -- the English-social studies teacher and the math-science teacher. Based on the needs of children and the wishes of the teachers, the math-science general education program was created. Unlike English and social studies, it never gained school-wide acceptance. It was also apparent that all teachers in the school had to commit themselves to continuous graduate level studies in order to keep up with the proliferation of knowledge. A positive financial reward system instituted by a forward-looking

Schenectady Board of Education encourage the continuation of this process

A report of the observations of the faculty may interest you. Most indicate that it is a far greater challenge to teach fresh material each period rather than to repeat lessons four or five times a day. Teachers find the transitional shock from a child centered curriculum to a subject centered curriculum is gradual for the students with few, if any, developing psychological resistance to junior high. When it is functioning at optimum each teacher meets only thirty new students a year and has a total of only 60 different students daily. Teachers, who cannot operate on a problem solving approach, may use the class time in a more traditional manner(subject centered) but those who enjoy the large teaching unit technique find this arrangement to be advantageous. Everyone reports that it reduces the fragmentation of knowledge and is thereby more in keeping with the liberal arts tradition. It also tends to bring together a faculty which willingly and systematically is cognizant of the impact of education on the learner, because of prolonged association with the child and his parent. The teacher who receives a real satisfaction in teaching within a given area (government, social problems, mythology, leterature, arts, etc.) has an outlet by making a contribution to our humanities program.

Unlike core, we have never attempted complete integration of the subject matter based on a problem solving technique. We take this position consciously because we feel that total integration ignores the fact that each discipline proceeds subject to its own methods of investigation and syntatical considerations. The master schedule makes it possible to integrate, correlate, plan and execute this plan in the time available. Yes, there is a separate curriculum for each discipline! Teachers are constantly urged to plan in large units and to bring together in every possible way the relatedness of their subjects. They are, not, however, forced to do it.

You may rightfully ask if the organization is achieving its purpose ? Quality measurement studies indicate that the school has a higher achievement index than its neighbors which cannot entirely be explained by a higher potential of intellect. A catalogue of school activities included field trips, visits to industry, the theatre, museums, geological and ecological area; visits by speakers, debators, guest assemblies and organized symposiums; involvement in the life of the community by service, financial contributions and personal commitment; leadership building activities including government, sports participation and inter-school programs; visits to the city, county and state seat of government; participation in pre-K observations and discussions; presentations of major works of drama and music both vocal and instrumental; trips to New York City, Boston and other places of cultural interest; school wide functions such as science fair, sports night, fine arts-industrial arts night; writing experiences for the Anthology, the student newspaper, and the famous person's day. When these are added to the countless social and vocational activities, and the advanced and enrichment courses, it indicates that the students and the faculty are moving in participation to the fullest extent in a well-rounded educational experience. All of these activities cut across subject matter lines and conventional time-blocks of one period, although the seeds of their origin usually are planted within one subject area. It is the writer's contention that only the general education philosophy and organization wherein teachers have time and the responsibility for more than one discipline, one can offer these enriching experiences which expose Oneidians to the full spectrum of educational thought and action.

General education programs create problems which may be knotty but are not insurmountable. It is true that trained teachers are in short supply. Scheduling is difficult. Finding scholars for the junior high who are also good teachers, is a frustrating experience. The explosion in subject matter makes it extremely difficult for the teachers to keep up with daily discoveries as they appear in the professional literature. The attraction of teachers and college graduates who are scholarly in their field to lucrative industrial positions is discouraging to all administrators.

Thirty-five years of experimentation-not really! We don't consider this approach to be experimental. Rather, it is a way of life, and we believe the time and subject matter arrangment encourages intellectual growth. That is its function and to that end we are truly dedicated.

Are there other ways to arrange the curriculum ? The answer is obvious. It behooves professional educators to plan strategy and tactics to capitalize on the advantages and to minimize the disadvantages of any system they devise. In this arrangement, tailored to the needs of the community and attuned to the philosohpical position of the faculty, lies one demonstration of the true strength of the American educational system.

INTRODUCTION TO THE SPEAKER

DR. DAVID W. BEGGS

A study of the Middle School is not complete without some consideration of the instructional methods that seem most appropriate for it. While a consideration of basic purposes, issues, and viewpoints are essential they should be followed by a statement of methods of implementation. Taking the unique characteristics of early adolescents into consideration, what steps should the school take to best educate these youngsters. One of the more effective instructional methods in use is the utilization of interdisciplinary team teaching. This mode of instruction which consists of teams of teachers of different disciplines working with one group of youngsters (ordinarily four teachers planning for four classes) seems most effective for Middle School instruction.

One of the best qualified men in the country, both by school experience and theoretical knowledge, to speak to this subject is Dr. David Beggs of Indiana University. The book which he edited, Team Teaching: Bold New Venture, presents some indication of the depth of practical administrative experience Dr. Beggs has had in team teaching in the public schools. His services as a consultant and speaker are continuously being sought. This presentation should accomplish much in the progress from theory to practice in the instructional theory for the Middle School.

TEAM TEACHING MEETS A FRIEND

DAVID W. BEGGS, III

Team teaching has met another youthful friend. And that new associate is the Middle School.

Both are young, not completely directed; but each has vitality and can give strength to the other. Like all intimate associations in the passage of time, these friends may support each other and contribute to their individual development.

Team teaching is a theme with infinite variations. It can be found at all levels, in various forms, of the educational enterprise. However, the full value of team teaching is often depreciated because the cooperative decision-making, the multiple evaluation potentials and control of time and organization are not actively shared by members of teaching teams. Sometimes this is the blame of the team members who prefer to work in deadening isolation, even if the promise of improved expertise in instruction is denied. Sometimes, and perhaps more often, this is the fault of the school administrators who do not provide the organizational climate for team teaching to be effective.

Team teaching, after all, is a relatively new concept. From one view, its growth and development has been heartening. From another view, its progress has been plagued by problems of appropriate planning and careful implementation. But human progress is the substitution of a problem solved for a problem to be met. Instead of decrying the problems of some teaching teams the challenge is to find ways to make other teams more effective in achieving their goals.

The teaming concept has dynamic power because the foundation of the notion is built on the conviction that teachers can make important decisions about both what and how instruction is to be given. No rigid class schedule is to determine the duration or frequency of instruction. Instead teachers are to make decisions about appropriate lengths and numbers of instructional sessions. No text publisher or curriculum committee is to formulate instructional objectives. But individual teachers, familiar with individual learners, are to establish instructional goals. And with the combined power of more than one teacher, use of all of the school's tools -- time, materials, grouping and instructional methods -- to benefit individual student learning.

Team teaching programs which do not provide time for teachers to work together, which do not give teachers the opportunity to determine how and when instruction is to be given, and which do not provide for teachers to specialize in those aspects of teaching they do best, are prostituting the concept of team teaching. Such programs are hammering on cold steel.

The Middle School is dedicated to the uniqueness of individuals. And team teaching is a means whereby teachers can provide for that uniqueness. At the same time teaming is a manifestation of the realization that teachers are unique. Each one has strength and benefit to give both to students and other members of the team.

In the senior high school teams are most often composed of teachers working within one subject area. Three English teachers are on one team and four social studies teachers are on another. But this does not, and perhaps should not, be the design for the Middle School. Instead the teams in the Middle School should be composed of teachers representing a range of subject interests. Since the Middle School should guard against focusing students' learning, the teams of teachers who work with youth should represent diverse content interests.

Grasping the process of inquiry is of higher value than accumulating funds of information. If students in the Middle School are to become fully functioning individuals, they must have a broad range of enlightening experiences.

The youth that cries that, "Music stinks," or says that, "Art is square," is the youth who has not been taught to listen and to see. And the school that fails to prepare youth to appreciate music, art, or any of the other wonders of man's creativity is a school which has not viewed education as being concerned with the development of the fully functioning individual. The Middle School needs to be concerned with teaching the "whole man" and team teaching is an appropriate method of getting the job done.

The Middle School teaching team ought to be composed of teachers representing expertise in instruction in each of the disciplines the school professes to be important for students to explore.

But viewing the Middle School through analysis of what content is taught is a shaded glance. The Middle School has responsibility for nuturing the interests and developing the abilities of each learner. And this can be done best through providing the opportunity for students to meet sometimes alone with teachers and sometimes in small inquiry or discussion groups.

At other times during the school day students should be free to work on their own. Galileo put it this way: "You can't teach a man anything, you can only help him find wisdom within himself." The Middle School needs to give youth the opportunity for working on their own. But there is also a mandate that teachers should guide, direct, and stimulate youth's interest.

Learning is more than listening; teaching is more than talking. Instead learning results from being involved, from discussing, reading, constructing, trying, rearranging, and doing. The Middle School needs to be a place where students are, for a large part of their day, active. And teaching is the companion process of assessing students needs, and proposing activities for students' self-development. The Middle School must be a place where teachers can observe youth at work, consult with professional colleagues about students' learning, and exchange ideas about teaching methods.

The team in the Middle School might serve a group of 240 students. The professional team members might represent one teacher from art, mathematics, music, science, and social studies and two teachers from the language arts field. Supporting these members of the team should be two or three non-certified clerks or aides. The non-certified members of the team should carry out the auxiliary tasks of teaching which do not require professional decisions. Team teachers have to be free to work with youth and their colleagues. The effectiveness of the team, and of the students' education is diminished as teachers have subtractions from their time to do routine chores, to perform clerical service, or to provide for safety and supervision of youth. Those thinking seriously of team teaching in the Middle School should think carefully about the inclusion of non-certified assistants for the teaching team.

There are some fundamental assumptions applied in teaming that are worth considering. These are:

For the student:

A. Increased learning can result through the cooperative efforts of the teaching team on a common institutional problem.
B. Psychological security can be established and students will adjust to more than one teacher working with a single student.
C. Interest in content can be increased as the result of team planning, presenting and structuring appropriate learning activities.
D. Students profit from being in specialized classes of varying size.

For the teacher:

A. Teachers can work productively and in satisfying harmony with other teachers on instructional problems.
B. Improvement in teaching performance can take place through team membership.
C. The opportunity for specialized and therefore improved instructional performance may result from team teaching.

For the curriculum:

A. Learning experience selection, presentation and student involvement are improved by team teaching.
B. A broader and deeper body of

knowledge is potentially available to students as a result of team teaching.

For the administrator:	A.	Team teaching demands special consideration in scheduling students and teachers.
	B.	Evaluation of teaching skill becomes vital to making decisions about the teaching team's professional composition.
	C.	Team teaching, like any change in behavior, requires encouragement and positive leadership from the administrator.
For the facilities:	A.	Team teaching has space requirements which must be honored for instructional groups, for team activities and for the individual teacher's preparation.

The history of educational development has been linked with concerns for particular groups of students. At one point the concern was for the college-bound; the slow learners had their day, the gifted came to the front; then the disadvantaged were conversation pieces of the moment. Beneficial as each of the thoughts and programs accompanying concerns for these groups have been, real progress in adding excellence to instruction will only come when educators resist talking and planning for groups and begin thinking and organizing for individualized instruction. Edwin Markham put it best when he wrote:

> "We are all blind until we see that in
> the human plan, there is nothing worth
> the making if it does not make the man."

The advent of the Middle School offers a departure from old, not fully satisfactory ways of teaching. New means need to be employed to get to the new ends projected for education in these times. How unfortunate if those report this period record the development of the Middle Schools you are developing as worked-over models of yesterday's schools. The growth of the Middle School offers the opportunity to seek new methods of bringing students and teachers together. The development of the Middle School provides the material for shaping new forms which use the full potentials of team teaching. And the Middle School provides the chance to leap from theory to practice in individualizing instruction for youth.

But will you meet the challenge? What will you do with the opportunity to make good schools even better? It will be interesting to see.

INTRODUCTION TO THE SPEAKER

BERNARD WELCH

The theory for the instructional methods of inter-disciplinary team teaching have been ably and knowledgeably presented. The question remains as to whether these principles can be applied to a practical school setting. Does inter-disciplinary team teaching operate effectively in a Middle School setting? The most accepted method of reaching an answer to this question is to investigate in schools which are utilizing this method.

Fortunately a school, located in the suburbs of Albany within ten miles of the University was noted as having an extremely effective inter-disciplinary team teaching approach in their junior high school. The principal, Bernard Welch, of this seventh and eighth grade junior high school, Lisha Kill J.H.S., has agreed to present a case study of the history and current operation of their instructional program. Those people who are most concerned with this phase of Middle School development should find Mr. Welch both knowledgeable and interesting in his presentation of one of the more efficacious methods of working with early adolescents.

ADMINISTRATOR'S REPORT ON INTERDISCIPLINARY TEAM TEACHING

BERNARD WELCH

INTRODUCTION

No single event in the history of the United States has had such a profound effect on American Education as that which took place in October of 1957, when the Soviet Union placed in orbit the first satellite. The beginning of the age of Sputnik heralded the revolution of American education. Our complacency was suddenly and forcefully shattered with the realization that we were in real danger of losing world leadership. Justifiable or not, the brunt of the blame fell squarely upon the shoulders of the educator. We were accused of being archaic not only in our physical plants, but as well in our very philosophy, methods and content.

In retrospect, it has turned to the favor of education generally, that no other "whipping boy" was available, because no other factor in our history has ever created such a favorable climate for change. The American people, and especially the political leadership, recognising the overwhelming needs of the educational structure immediately gave unprecedented support to innovation and improvement. Support for new programs and projects long sought suddenly received recognition and finances that enabled the professional educator to experiment with ideas that had lain dormant for altogether too long. Foremost of these new trends was TEAM TEACHING. The following is an attempt to illustrate how one school successfully innovated a practical application of Interdisciplinary Team Teaching.

A. Background of the School System

Colonie Central School District #1 (South Colonie) is one of the two school districts in the Town of Colonie. The Town of Colonie is fifty square miles in area, with a population exceeding 60,000 and a potential growth to 200,000. Colonie is a large triangular, suburban area, bordered by the City of Schenectady, the Mohawk

River, Cohoes, the Hudson River, Town of Niskayuna, Watervliet, Albany and the Town of Guilderland. In the South Colonie School District we have nearly 8,000 students, kindergarten through twelfth grade. The incoming kindergarten for the fall of 1966 numbered 850, so we are quickly approaching classes of 1,000, and a student body of 13,000. The other district in Colonie is North Colonie Central School District #5, and though it is only six years old has over 5,000 students.

In our district we presently have nine schools and are in the process of a building program which will add two elementary schools and a new junior high school. Present schools are:

Elementary	Junior High School	High School
Maywood	Lisha Kill	Colonie Central
Roosevelt		
Roessleville		
Colonie Village		
West Albany		
Shaker Road		
Saddlewood		

Each of our elementary schools houses approximately 600 students. Lisha Kill Junior High School has a seventh and eighth grade student body of 1230. Colonie Central, a grade nine through twelve building, houses 2200 students. We are presently conducting 28 elementary classes in rented quarters. The two new elementary buildings will be rated at 600 each and the new junior high school will be rated at 1200+ student capacity.

We have 450 professional staff members. Each elementary school has a building Principal. A Principal and Vice-Principal supervise activities in the junior high and a Principal and three Vice-Principals direct senior high school functions. We also have our own administrative intern program. At the present, one is working at the elementary level and one at the early secondary level.

Our student body is primarily made up of the sons and daughters of middle class typical suburbanites. Most of the working parents commute to one of the tri-cities of Albany, Troy or Schenectady where they are employed in professional and/or semi-professional capacities.

Approximately 45% of the graduates go on to institutions of higher learning.

B. Grouping of the Students

1. Heterogeneous grouping: Prior to Sputnik, the junior high school pupils of Colonie Central District #1 were grouped heterogeneously, that is to say, no particular plan of grouping students was practiced. Historically, this practice has been largely dictated by the fact that sufficient numbers of pupils in a particular grade level made ability grouping or any other type of grouping, for that matter, largely impractical and extravagant. Even with the growth factor having diminishing effects on the impracticality of non-grouping, any trend toward grouping practices received widespread opposition because of the charge of its being undemocratic. Also, any suggestion of grouping spotlighted certain real difficulties to be encountered. Noteworthy children naturally feel stigmatized when assigned to a group lower than average, and this assignment is resented by the parents of such children. Secondly, staff members resent being assigned to teach slow groups and the better teachers all too frequently are assigned to teach the better students. However, in spite of the opposition, it became apparent that certain steps had to be taken if capable students were to be given the opportunity to progress at a rate consistent with their abilities. We could no longer afford the luxury of not taking action aimed at improving the opportunities for our students.

2. Homogeneous grouping: When the enrollment figures allowed a change in grouping, a system of homogeneous grouping was introduced which was based, in the junior high school, on the ability of each student to progress academically at a rate most suitable to those of similar abilities. This is best illustrated by reprinting the statement of policy on grouping from the Teacher's Handbook of 1959, we quote:

> In an attempt to provide the most effective instruction for each student, a form of ability grouping is used in the junior high school. The student's reading level is the primary consideration in our grouping but consideration is also given to IQ, past achievement, teacher recommendations and all other information which we can accumulate

about each student. In our grouping we have tried to set up three different types of sections. The students who are markedly above grade level in reading and academic ability are placed together in sections which are expected to do work at a level above that normally expected for their grade. The students whose reading scores and abilities range from slightly above grade level to slightly below grade level are grouped together in sections which are expected to do normal grade level work. The great majority of our students are in these average groups. Our third type of section is made up of students who are markedly below grade level in reading and other basic skills. We try to keep these groups smaller so that the students will be able to receive more of the individual attention which they so badly need.

C. Improved Building Utilization vs. Double Sessions

In the winter of 1962, it became apparent that our increased enrollment would create scheduling problems in September, 1963. Lisha Kill Junior High School had a rated capacity of 900 students. We were, in 1962-63, housing 970 students in grade 7-8, and our projected enrollment indicated that we would have:

1040 in September of 1963
1100 in September of 1964
1160 in September of 1965
1220 in September of 1966

We could easily see that no relief was in sight before September, 1968 when we would have a new junior high school.

At this time, we made a critical analysis of our problems and searched for some direction which would solve not only housing problems but which would also alleviate some of the apparent shortcomings in our overall grouping policy. We were also determined to do all possible to improve what was generally rated as an excellent educational program for a junior high school.

D. Definition of Interdisciplinary Team Teaching

Current literature at the time contained an abundant assortment of articles on team teaching methods that were being attempted at various schools throughout the country. Although we did not desire to adopt one of these plans for the mere sake of "Jumping on the Bandwagon" we did take a critical view of their advantages and disadvantages. It was evident to us that somewhere within this scope lay the answers to many of our problems. Our analysis showed us that some form of a school within a school type of organization would aid in answering our grouping critics; and if we could at the same time devise a schedule built around the four major areas of English, Social Studies, Mathematics and Science, we could then temporarily solve some of our housing problems. The outcome of this thinking was teaching teams made up of four teachers, one each in English, Social Studies, Mathematics and Science. To each team of teachers we would assign four sections of students homogeneously grouped from the four levels of ability. This small school within a school would involve interdisciplinary team teaching in that the four major disciplines would each be represented on the team. Four different levels of ability would be represented by drawing off one section from each of the school's overall population which would be ranked according to academic ability. How we went about this task is shown on the following pages.

II. GOALS AND OBJECTIVES

A. Large Group Instruction

Many activities in the school curriculum lend themselves to large group instruction. Among these are: introducing new units or subject matter, the showing of movies and film strips, field trips, speakers or consultants from within or without the school system, the giving of certain tests and demonstrations. Our objective was to find a room large enough to hold approximately 130 students and to schedule the students and teachers to make the room available to everyone, everyday.

B. Small Group Instruction

Research points out that small group instruction will provide opportunities for teachers to measure individual students' growth and development. Teachers will have a chance to try a variety of teaching techniques that will meet students' needs. It will provide an opportunity for students to learn how to become better group members. Students can learn how to apply subject matter rather than just to receive it passively. The small group instruction also provides an opportunity to know their teacher in a different type of atmosphere. Sighting these opportunities, it seems advantageous to try to incorporate the small group instruction plan into our curriculum.

C. Individual Instruction

Since man's knowledge is almost doubling every ten years, it is impossible to incorporate this increased knowledge into the classroom each year. We feel that more emphasis on the student's ability to pursue fields of interest must be placed on an individual basis. The need for time and a place to conduct research is essential if we are to meet the challenges that our present world offers. To provide this opportunity, a total change is necessary in the structure of student scheduling.

D. Flexible Grouping - Students

As we stated in our introduction, we were concerned about the grouping policy we had been practicing. We strongly felt that neither heterogeneous nor homogeneous grouping as it were, held the answer. Our goal was to meet somewhere in between these two areas where we could meet the critics of both, and at the same time, where we could salvage the strengths in both systems.

What we were seeking then was a method of grouping that would enable us to absorb, from seven different elementary schools, a student body that we could then place in an educational environment that could best challenge their ability to do junior high school work. Because of the different elementary backgrounds of our students and because of the inherent weakness of evaluating standards, we are never sure of accurately placing students, regardless of our grouping policy. We felt that because of these weaknesses, we somehow had to leave a margin for error in order to avoid doing irreparable harm to our students. We were convinced then that our grouping policy must have as its one major prerequisite, "flexibility." Regardless of its convenience to faculty or administration our policy had to be governed by the effect that it would have on the most important factor in the school, the student himself! In all our thinking, then, we continually asked ourselves the question - is it flexible enough to correct any error in placement and does it allow us to place the student where he can perform to the maximum of his capabilities?

E. Flexible Teaching Methods

Foremost in our list of goals and objectives in instituting a new pattern of organization, was the desire to take advantage of some of the proven successful new innovations in teaching practices. Professional literature for the past ten years contains a multitude of suggestions for the improvement of instruction. Granted that many of these are; thus far, unproven, it behooves all of us to take a critical look at them with the thought that we might possibly improve our own climate for learning.

We also realized that with the size of our staff we had another problem in that we wished to use extreme care in mandating procedures that would alienate any of them. What then, we desired to do was:

a. provide for the professional corps, a situation that would encourage the farsighted and adventuresome; and
b. the opportunity to experiment, but at the same time, permit the climate that they found most successful in their experiences.

We set as our goal, then, the procedures that would encourage flexible teaching methods; but at the same time, assured our staff that by being flexible, the opportunity to retreat to try again was never available.

F. Improvement of Communications

In four years, our faculty increased about twenty in number. Problems of internal communication were becoming greater, especially with the department chairman located in the high school. Because of sheer numbers, the faculty meetings could only provide one-way communication - administration to staff. Time was an important factor preventing the necessary teacher-guidance conferences. Unless a student was brought in on the early activity bus or stayed for the late buses, there was virtually no time in the scheduled program for teacher-student communication on a one to one basis. We were looking for a communication system that would provide time for individual, small and large group instruction. How could one internal communication system be improved both horizontally and vertically in conjunction with guidance and administration.

G. Meeting the Challenge of New Curricula Developments.

Nowhere is the revolution in education more apparent than in the total fund of knowledge that is being passed on to each succeeding generation. Because of the very mass itself, better methods must be devised if we are to accomplish the task that faces us. We are continuing to double the material to be covered in shorter spans of time. For example our total fund of knowledge doubled in the years 1910-1940. It again doubled from 1940-1960. From 1960-1970 it is expected to double again and then from 1970-1975 it is expected to double again and then from 1975-1980 it is again anticipated to double. We cannot afford the luxury of ninettenth century teaching methods if we are to keep pace with twentieth century progress. We must face the utter reality of our situation and search untiringly for new and better methods of educating our young. Making it possible for teachers to take advantage of our technological advances is the prime responsibility of the school administrator.

GROUPING POLICIES

In an attempt to provide the most effective instruction for each student, a form of ability grouping is used in our school. The student's reading level is the primary consideration in our grouping but careful attention is also given to I.Q., past achievement, teacher recommendations, standardized test data and all other information which we can accumulate about each student.

The students of each grade are distributed among four instructional tracks according to their anticipated achievement based upon their past performance. Placement in these tracks is determined in the following manner:

1. Students are ranked from the most capable to the least capable on the basis of all available information.

2. After his rank in the grade has been established

for each student, distribution among the tracks is made in roughly the following proportions:

Honors	Track	-	Top Quarter
High Average	"	-	Second Quarter (actually about 30%)
Average	"	-	Third Quarter
Basic	"	-	Fourth Quarter (actually about 20%)

All sections in each track are as nearly comparable as possible and each section spans the total range of ability found within the track. That is, each section will have some of the best and some of the poorest students in the cross-section of the opoulation making up its level. (Please note limited exceptions to this outlined in section 4.)

3. Each teaching team which works with a single grade has a section from each of the four tracks.

4. In the eighth grade a special group has been picked for acceleration in mathematics and science. This class has been created by concentrating in one section the students from the Honors Track who have demonstrated unusually high achievement and interest in mathematics and science. These students will complete the equivalent of the standard elementary algebra and general science courses by the end of the eighth grade. They will take mathematics 10 and biology in grade 9. The remainder of the eighth grade students in the Honors Track will be distributed among the four other sections in the manner indicated above.

In grade seven students who have exhibited outstanding ability in mathematics and science in elementary school are concentrated in two of the Honors Track's five sections. Since it is assumed that the major part of the eighth grade accelerated group will come from these sections, their work in mathematics and science will be adjusted to help them prepare for this possible acceleration.

We believe that our grouping procedures provide the following advantages:

1. Teaching teams work with a "little school" group which has the same range of ability

and achievement found within the total school population.
2. Teaching assignments are equitable with no teacher having a disproportionate number of superior or poor students.
3. In most cases, a student can be transferred up or down within his own team.
4. Leadership is distributed among all the teams since each team's students are typical of the total school community. This range of ability on each team should also contribute to team morale, and encourage competition between teams.
5. Foreign languages may be scheduled in the most efficient way because qualified students are evenly distributed among all of the teams.
6. The large study situations can function most effectively because no team has an excessive number of the poorer students who will require the most individual help.
7. The cooperative development of instructional materials by the members of each department is enhanced by the fact that virtually all teachers of each grade are working with the same range of abilities. The creation of definite strata of achievement also encourages the development of appropriate curricula.
8. Behavior problems and children from poorer-socio-economic situations are dispersed among the various teams so that they can benefit from the examples of students who are different from themselves.

As junior high school instruction proceeds necessary adjustments in placement will be made by transferring students from their original track to another track which promises to provide more appropriate instruction. These transfers may be either up or down.

Continuing refinements in track selection will be made as students move through the junior high school grades and gain greater experience with departmentalized instruction. Further adjustments in track assignments on a subject-by-subject basis can be made when the block scheduling of grades 7 and 8 is replaced by the unit scheduling of grades 9-12.

A well-defined curriculum for each of the four tracks is essential.

This type of grouping is pointless unless a concerted effort is made to adjust the materials and methods used to the characteristics of the various tracks. The teachers of the High Average and Average sections will find that the greatest range of abilities undoubtedly exists within these sections. Teachers must, therefore, be ready to make the adjustments to individual differences which this range of ability will necessitate. The main emphasis in the Basic sections will have to be on strengthening the basic study skills. Teachers should not allow themselves to succumb to the temptation of providing these students with a watered down program aimed mainly at keeping the class busy. Materials should be carefully selected and activities planned so that the slower groups will be pursuing a definitely developmental program of work.

No system of grouping can produce a class in which all of the students are alike. We want to emphasize again that in all sections - regardless of the track - adaptations must be made to individual differences within the section. Every effort will be made to keep our grouping flexible and during the school year it may become advisable to transfer students from one section to another. These requests for transfers may originate from either a student, a teacher or a parent. If a teacher feels that a particular student would do better in another section, he should immediately make that recommendation to the guidance counselor for the section. Arrangements can then be made for study of the records, consultations among teachers and, if necessary, discussions with the administration and parents. If, on the basis of all available information, a transfer seems desirable, the counselor will write the new schedule and inform all interested parties when the change of schedule will go into effect. Under no circumstances should any teacher ever tell a student that his section is to be changed without having gone through the regular channels in arriving at this decision. Discussions of the proper placement of students in sections are, of course, greatly expedited by our team planning conferences and full advantage should be taken of these opportunities to consider the most appropriate section for each student.

These adjustments in track assignment will probably result in some shrinkage in the Honors and Basic tracks and growth in the High Average and Average tracks. Our objective in placing students in tracks should always be the placement of each student in the highest track in which he can perform effectively.

The type of instruction to be given in the various tracks in the basic academic subjects (English, mathematics, science and social studies) is as follows:

Honors - There is substantial enrichment and/or acceleration going beyond the standard state course of study. In grade 7 the emphasis is on enrichment supplemented by enough acceleration to make it possible for carefully selected students to undertake an accelerated program in mathematics and science in grade 8. The majority of the students would continue their enriched program through grade 8 and the succeeding grades. All students in the Honors track, whether enriched or accelerated, will be compelled to take Regents Examinations whenever they are offered in their subjects. (References to Regents Examinations apply basically to the higher grades.) No Regents Examinations are offered in grades 7 and 8 except for the accelerated mathematics students who take the elementary algebra Regents in grade 8.)

High Average - Essentially the appropriate state curriculum provides the basis for instruction, but limited enrichment should be attempted when feasible. Regents Examinations are compulsory whenever offered.

Average - The state curriculum serves as a guideline, but instruction should be modified to compensate for the lower academic potential of the students in this track. Regents Examinations will not be required. In a rare instance a particularly able student in this track might request, and be granted permission to take the appropriate Regents Examination.

Basic - This track for students who have had substantial academic difficulty. The emphasis should be on remedial instruction and strengthening the basic skills. Organized efforts should be made to foster healthy attitudes in this group.

Tentative proposal for sectioning procedures and assignment of sections to teaching teams:

1. Rank students from the most capable to the least capable on the basis of all available information.

2. After his rank in the grade has been established for each student, assignment to sections will be made as follows:

Top	132 students - 22% - 5 sections -	Level I Honors
Next lower	180 students - 30% - 5 sections -	Level II High Average
Next Lower	180 students - 30% - 5 sections -	Level III Average
Lowest	108 students - 18% - 5 sections -	Level IV Basic

All sections at each level will be as nearly comparable as possible and each section will span the total range of ability found at its level. That is, each section will have some of the best and some of the poorest students in the cross-section of the population making up its level.

3. If a special group is picked for acceleration in mathematics and/or science, this group will be selected from the Level I students and placed in one section. The remaining Level I students will then be distributed among the other three sections in the manner indicated above.

A Team	B Team	C Team	D Team	E Team	
8-1	8-5	8-9	8-13	8-17	Level I
8-2	8-6	8-10	8-14	8-18	Level II
8-3	8-7	8-11	8-15	8-19	Level III
8-4	8-8	8-12	8-16	8-20	Level IV

IV. CRITICAL ANALYSIS

Lisha Kill has, at this writing, had three complete years of experience with interdisciplinary team teaching. To say that we were apprehensive at the outset of the program would be a gross understatement. However, we are very confident because we went into the program with the overwhelming support of our faculty. In fact, it was the faculty itself that gave us the greatest support in this undertaking. In undertaking to list the advantages and disadvantages of the program, we rely heavily upon those who have been closest to the program itself, the faculty, but at the same time we have solicited reaction from all concerned: faculty, auxiliary staff, students, parents and administrative personnel.

A. Advantages

1. Flexibility - The most notable reaction has been the built-in flexibility for the benefit of student grouping. We strongly feel that we have answered the objections of those who felt that neither homogeneous nor heterogeneous grouping provided an ideal solution. By placing students in heterogeneous teams and in homogeneous sections within the team we have provided a means for meeting the ideal academic grouping for each individual student. In our experience, the ease with which students are transferred within the team has been the most outstanding advantage of team teaching at Lisha Kill.

2. The teacher teams have the facility to be able to jointly plan curriculum for their individual teams and to exchange ideas between teams.

3. Teaching assignments are more equitable with no teacher having a disproportionate number of superior or poor students.

4. Student leadership is distributed among all the teams since each team's students are typical of the total school community. This range of ability on each team contributes to team morale and encourages competition between teams.

5. The large study situations function most effectively because no team has an excessive number of poorer students who require the most individual assistance.

6. Behavior problems and children from poorer socio-economic situations are dispersed among various teams so that they benefit from the examples of students who are different from themselves.

7. Students are able to identify themselves with a smaller school within a school and with team representation on student council are more closely related to student government.

5

8. Homework assignments and testing are staggered so that students are not overburdened at one particular time and left with nothing at other times.

9. All teachers, because of joint daily planning, are familiar with the curriculum structure of all the academic subjects.

10. Correlated planning of content and project work is more easily carried on especially between mathematics and science and between English and social studies.

11. Parent conferences can be arranged by the guidance counselor for times when all of a student's teachers are available, either during the common planning or unassigned period.

12. Individual teams may rearrange completely time and period schedules without interference with the overall school program. For example, each team may individually manipulate their block of time (120 minutes) so as to provide periods of various lengths.

13. Total team periods allow for single presentation to all team members at the same time such various items as films, guest speakers, group tests, etc., thus saving time that can better be utilized for individual assistance and instruction.

14. Field trips can now be planned by teams and built-in chaperoning is thus provided. Longer times for such trips are now available without disrupting a multiple number of classes.

15. During the academic assistance period students needing individual assistance have available to them, five periods per week, the classroom teacher that they are assigned to for that particular subject.

16. One of the greatest advantages of team teaching is the assistance provided to the beginning teacher. Experienced teachers are constantly available to answer the many, many questions that inevitably arose during the period of inexperience. This constitutes a fine substitute for the buddy system.

17. The advantages to the administration are many because of the built-in features of team teaching. The

principal may attend planning periods in order to handle many administrative problems that are more easily disposed of in small, intimate groups.

18. The relationship between teacher and principal is much closer and a climate is provided that lends itself to a more beneficial solution to mutual problems.

19. Building utilization has been improved to such an extent that we have absorbed some 1,200 students in a building designed for 900 without going on a staggered schedule or double sessions. Not only has this assisted our district financially, but more importantly, it has enabled us to improve our program to the benefit of the student body.

20. Corridor traffic problems are more easily coped with because teams are able to fluctuate their passing times to take advantage of lulls in corridor passing.

21. This scheduling arrangement has promoted the professional growth of the teachers by encouraging the exchange of ideas among the members of their own teaching team and between members of "twin" teams.

22. Communications between Administration, classroom teachers and auxiliary staff has been greatly improved because of this experiment. Each team captain becomes a vital link between the administration and the teachers and pupils on his team. Because regular team meetings are held daily, we have a built-in avenue for the dissemination of information to all personnel.

B. Disadvantages

1. Cost: We will readily admit that the program viewed on a purely financial basis is somewhat more expensive than conventional scheduling methods. Exactly how expensive is difficult to pinpoint because of the factors involved. It is true that a twenty per cent increase in staffing for the four major areas of English, social studies, mathematics and science is necessary, but the added services to the students far outweigh the additional teacher salaries needed to implement the program. To cite our own building as an example:

Conventional Schedule: 1200 students @ 30 per class would take 32 teachers to teach the four major areas. (40 sections in each area would take 8 teachers in that area), plus 20 study halls @ 60 per period totals an additional 4 teachers.

Total - 36 teachers

Team Teaching: 1200 students @ 30 per class would take 40 teachers. (40 sections in each area would take 10 teachers in that area), study halls are provided.

Total - 40 teachers

Total difference for 1200 students: 4 academic teachers.

2. Personality conflicts: Team teaching demands that the four professionals on the team be acceptable to each other. By the very nature of the teaching profession this is not an easy accomplishment. Extreme care must be exercised to properly balance the teaching team if personality conflicts are to be avoided. Balance must be the watchword in team formation. This balance must be evident in preparation, sex, age, professional attitudes, leadership qualities, and other personality traits. We, at Lisha Kill, have been fortunate in the respect. In our three years of experience we have been free from the problem we feared would plague us most. Perhaps we have been extremely fortunate in our team assignments, but we like to think that our success has been due to the efforts we have exerted in creating teaching teams based on balance and our own knowledge of the personalities of our staff.

3. No apparent changes take place under team teaching. Some critics accuse administrators of adopting changes that do not reflect any modification of the learning process but merely change physical plants and scheduling methods. To some extent this may well be true. We like to feel that, while our method of team teaching does not dictate a new or different method of teaching, it does provide a flexible arrangement for individual teacher adjustment to new ideas or innovations. We have been encouraged by the way in which our faculty has taken advantage of team teaching provisions to implement, innovate and adjust their particular teaching.

C. Summary

We feel that our very presentation in this paper speaks for how enthusiastic we at Lisha Kill are toward our method of team teaching. We have received overwhelming support for the program from every member of the staff and, most important, from the boys and girls who are affected by the program, our student body.

We look forward, in great anticipation, because we are confident that we have opened the doors to great possibilities. We are so confident that we in South Colonie have in June, 1966, broken ground for a new Junior High School designed around the concept of Team Teaching. In order to provide the flexibility we have sought so much, we have designed this new plant so that it may also be utilized for conventional teaching without any modification whatsoever.

MIDDLE SCHOOL SELECTED BIBLIOGRAPHY

MARCH, 1967

AASA, Research Division, Middle School, Washington: Educational Research Service Circular, 1965.

"Administration: New England's First 'Middle School' a Success," Educational Summary (June 12, 1961), 2.

Alexander, William M. "The Junior High School: A Changing View," National Association of Secondary School Principals Bulletin, XLVIII (March 1964), pp. 15-24.

__________________"What Educational Plan for the In-Between Ager?" NEA Journal, LV (March, 1966) pp. 30-32.

__________________and Emmet L. Williams. "Schools for the Middle School Years," Educational Leadership, XXIII (December, 1965), pp. 26-29.

Baker, Lance. "The Middle School," Central New York Study Council Corp. Research Report No. 1966-1 Vol. 3.

"Barrington Middle School," Barrington, Illinois Public Schools, (1966).

Berman, Sidney. "As a Psychiatrist Sees Pressures on Middle Class Teen-Agers," National Education Association Journal, (February, 1965), p. 16-17 ff. LIV

Blackburn, T. E. "Unfinished Dream, The Junior High School" High School Journal, IL (February, 1966), pp. 209-13.

Boutwell, W. D. "What's Happening in Education? What are Middle Schools?" P.T.A. Magazine, LX (December, 1965), p. 14.

Broadhead, T. C. "Pupil Adjustment in the Semi-Departmental Elementary School," Elementary School Journal, LX (April, 1960), pp. 385-400.

Brod, Pearl. "The Middle School: Trends Toward Its Adoption," Clearing House, XI (February, 1966), pp. 331-333.

Buell, Clayton E. "What Grades in the Junior High School?," NASSP Bulletin, XLVI (February, 1962).

"Caudill Builds Two Middle Schools," Architectural Record (January, 1961), p. 132.

Clinchy, Evans. Two Middle Schools, Saginaw Township, Michigan. New York: Educational Facilities Laboratories, Inc., 1960.

Cuff, William A. "Middle Schools on the March," NASSP Bulletin, LI (February, 1967), pp. 82-86.

Curtis, Thomas E. "Crucial Times for the Junior High School." New York State Education, LIII (February, 1966), p. 14-15.

Dacus, Wilfred P. "A Study of the Grade Organizational Structure of the Junior High School as Measured by Social Maturity, Emotional Maturity, Physical Maturity, and Opposite-Sex Choices." Dissertation Abstracts, 24 (1963), 1461-1462, University of Houston.

"Data Derived from the Middle School Survey," Montclair Public Schools, Montclair, New Jersey, (October, 1965).

Douglas, J.W.B. "The Age of Reaching Puberty: Some Associated Factors and Some Educational Implications," The Scientific Basis of Medicine Annual Reviews, London, 1966.

Educational Facilities Laboratories. Middle School: A Report of Two Conferences in Mt. Kisco on the Definition of Its Purposes, Its Spirit, and Its Shape. New York: Educational Facilities Lab-

"Farewell to Junior High," Education U.S.A., (April 29, 1965), p. 143.

Fogg, Walter F. Advantages of the 6-7-8 Junior High School. Chicago: National Association of Secondary School Principals, 1964. (Pamphlet)

Garn, S.M. and C.G. Rohman. "Interaction and Genetics in the Timing of Growth and Development," Pediatrics Clinics of North America, XIII (1966), p. 353.

Gerson, Raymond J. "Rationale for a Middle School," Pearl River Public Schools, (April, 1965).

Hathaway, M.L. "Heights and Weights of Children and Youth in the United States," Home Economics Research Report #10, U.S. Dept. of Agriculture, 1960.

Havighurst, Robert J. "Lost Innocence - Modern Junior High School Youth," National Association of Secondary School Principals Bulletin, XLIX, pp. 1-4.

Howard, A.W. "Which Years in Junior High," Clearing House, XXXIII (March, 1959), pp. 405-408.

Hull, J.H. "Are Junior High Schools the Answer," Educational Leadership, XXIII (December, 1965), pp. 213-216.

"Integration in Clusters: Efforts of New York City," Times Educational Supplement, 2557 (May 22, 1964). p. 1421.

Johnson, Mauritz. "School in the Middle - Junior High: Education's Problem Child," Saturday Review, XLV (July 1962), pp. 40-42, 56-57.

"Junior High School: Transition for Chaos?" Educational Leadership, (December, 1965).

Lounsbury, John H. and Marani, Jean V. The Junior High School We Saw: One Day in the Eighth Grade, Washington, D.C.: Association for Supervision and Curriculum Development, 1964.

Madon, C.A. "Middle School, Its Philosophical Purpose," Clearing House, February, 1966.

McCormick, M. J. and A. G. Parkhan. "Junior High School Should be Eliminated," *The Instructor*, LXXV, (November, 1965), p. 27.

Mead, Margaret, "Early Adolescence in the United States," *National Association of Secondary-School Principals, Bulletin*, XLIX, (April, 1965), pp. 5-10.

Meredith, H. "Changes in Stature and Body Weight in North American Boys During the Last 80 Years," *Advances in Child Development and Behavior*, Edited by L. P. Lepsitt and C. C. Spiker. I, New York: Academic Press, 1963.

Michigan Association of School Boards. *The Middle School*. Lansing, 1966. (Pamphlet)

"A Middle School Above Par," *American School and University*, XXXVIII (April, 1966), pp. 68-69

"Middle School for Tomorrow, Successor to the Junior High School," *School Management*, IV (November, 1960), pp. 101-103, 105-107.

Mills, George E. "The How and Why of the Middle School," *The Nation's Schools*, LXVIII (December, 1961) pp. 43-53, 72-74.

Murphy, Judith. *Middle Schools*, Educational Facilities Laboratories, New York, 1965.

Nickerson, Neal. *Junior High Schools are on the Way Out*.

Olmstead, W. C., H. M. Wessel and P. Woolsey, "How to Improve the Instructional Program in the Junior High School," *NASSP Bulletin*, XLV (April, 1961), pp. 191-296.

"Planning and Operating the Middle School," *Overview*, IV (March, 1963), pp. 52-55.

Rankin, Harold J. "Jamesville-DeWitt Central School District Position Paper on the Middle School," (May, 1965)

Rauschart, Edward, Pearl Comens and Kathleen Fales, "Report of the Middle School Study Committee." Town of Rye, (May, 1965).

"Recommended Grades or Years in Junior High or Middle Schools," Committee on Junior High School Education, *National Association of Secondary-School Principals*, Bulletin, LI (February, 1967), pp. 68-70.

Roberson, E. Wayne, and Richard H. Powell, "The Junior High School World: A Shadow Study," *NASSP Bulletin*, LI (February, 1967), pp. 77-81.

Sanders, David C. "School Organization: How Do You Decide?," *National Elementary Principal*, XLIII, (September, 1962), pp. 25-28.

Savino, Joseph. "The Nature and Objectives of the Minisink Valley Middle School," Minisink Valley Central School, Middletown, New York, 1966.

Shirts, Morris A. "Curriculum Misfits," *The National Association of Secondary School Principals Bulletin*, XLI (November, 1957), pp. 135-137.

Shuman, R. B. "Reorganization in Public Education," *Peabody Journal of Education*, XL (May, 1963), pp. 339-344.

Skogsburg, Alfred H. and Mauritz Johnson, Jr. "The Magic Numbers of 7, 8, 9: Is this Structure Really the Best for Junior High School?," *NEA Journal*, (March, 1963), pp. 50-51.

Strickland, Virgil E. "Where Does the Ninth Grade Belong?," *NASSP Bulletin*, LI (February, 1967), pp. 74-76.

"Summary of Ideas Gleaned from Visits, Interviews and Committee Discussions," Niskayuna Central School District Commission on Secondary School Organizations, March 12, 1958.

Tanner, James M. *Education and Physical Growth*. London: University of London Press, 1961.

"The Nation's School of the Month," *The Nation's Schools*, LXXVI (November, 1965), pp. 61-68.

Trump, J. Lloyd. "Junior High Versus Middle School," NASSP Bulletin, LI (February, 1967), pp. 71-73.

Vars, Gordon F. ed. "Change and the Junior High," Educational Leadership, XXIII (December, 1965), pp. 187-189.

——————— Guidelines for Junior High and Middle School Education - A Summary of Positions, Washington: National Association of Secondary School Principals, 1966.

Vredevoe, L. E. "Let's Reorganize our School System," The National Association of Secondary School Principals Bulletin, XLIII (May, 1958), pp. 40-44.

Wattenberg, William. "The Junior High -- A Psychologist's View," The National Association of Secondary School Principals Bulletin, XLIX (April, 1965), pp. 34-44.

White, William D. "Pupil Progress and Grade Combinations," NASSP Bulletin, LI (February, 1967), pp. 87-90.

"Why One District is Building a Middle School", School Management, VII (May, 1963).

Woodring, Paul. "The New Intermediate School," Saturday Review, (October 16, 1965).

Yost, William J. "Texas Survey of Junior High School Organization," Gulf School Researcher, IX (May, 1962), pp. 1-54.

Zdanowicz, Paul J. "The Meredith G. Williams Middle School," Educational Horizons, (Winter, 1962), pp. 45-52.